SAMSUNG

PDP-TELEVISION
(PLASMA DISPLAY PANEL)

Owner's Instructions

Before operating the unit,
please read this manual thoroughly,
and retain it for future reference.

ON-SCREEN MENUS
Picture **I**n **P**icture **(PIP)**
Colour Weakness Enhancement Mode
My **C**olour **C**ontrol
TELETEXT (Option)
SRS TruSurround XT **SRS TruSurroundXT**
DNIe™ **D**igital **N**atural **I**mage **e**ngine

This device is a Class B digital apparatus.
Register your product at www.samsung.com/global/register

- ***Screen Image retention***
  Do not display a still image (such as on a video game or when hooking up a PC to this PDP) on the plasma monitor panel for more than 2 hours as it can cause screen image retention. This image retention is also known as “screen burn”. To avoid such image retention, reduce the degree of brightness and contrast of the screen when displaying a still image.

- ***Height***
  The PDP can normally operate only under 2000m in height. It might abnormally function at a place over 2000m in height so do not install and operate there.

- ***Heat on the top of the PDP TV***
  The top side of the product may be hot after long periods of use as heat dissipates from the panel through the vent hole in the upper part of the product.
  This is normal and does not indicate any defect or operation failure of the product.
  However, children should be prevented from touching the upper part of the product.

- ***The product is making a ‘cracking’ noise.***
  A ‘cracking’ noise may occur when the product contracts or expands due to a change of surrounding environment such as temperature or humidity. This is normal and not a defect of the unit.

- ***Cell Defects***
  The PDP uses a panel consisting of 1,230,000(SD-level) to 3,150,000(HD-level) pixels which require sophisticated technology to produce. However, there may be few bright or dark pixels on the screen. These pixels will have no impact on the performance of the product.

- ***Avoid operating the TV at temperatures below 5°C(41°F)***

- ***A still image displayed too long may cause permanent damage to the PDP Panel.***

  Watching the PDP TV in 4:3 format for a long period of time may leave traces of borders displayed on the left, right and centre of the screen caused by the difference of light emission on the screen.
  Playing a DVD or a game console may cause similar effect to the screen.
  Damages caused by the above effect are not covered by the Warranty.

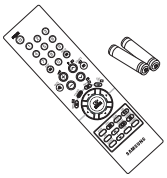
- ***Afterimage on the Screen.***
  Displaying still images from Video games and PC for longer than a certain period of time may produce partial afterimages.
  To prevent this effect, reduce the ‘brightness’ and ‘contrast’ when displaying still images.

- ***Warranty***
  - Warranty does not cover any damage caused by image retention.
  - Burn-in is not covered by the warranty.

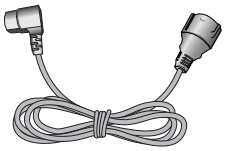
- ***Installation***
  Be sure to contact an authorized service centre, when installing your set in a location with heavy dust, high or low temperatures, high humidity, chemical substance and where it operates continually such as the airport, the train station etc.
  Failure to do so may cause a serious damage to your set.

Checking Parts

Owner's Instructions

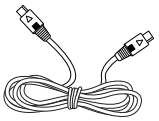


Remote Control/
AAA Batteries



Power Cord

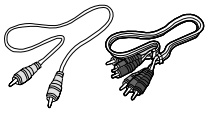
Sold Separately



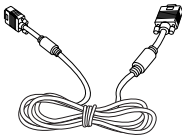
S-VIDEO Cable

HDMI Cable

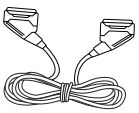
Antenna Cable



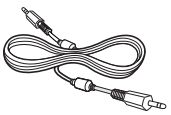
Component Cables
(RCA)



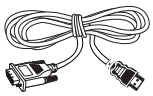
PC Cable



Scart Cable



PC Audio Cable



HDMI/DVI Cable

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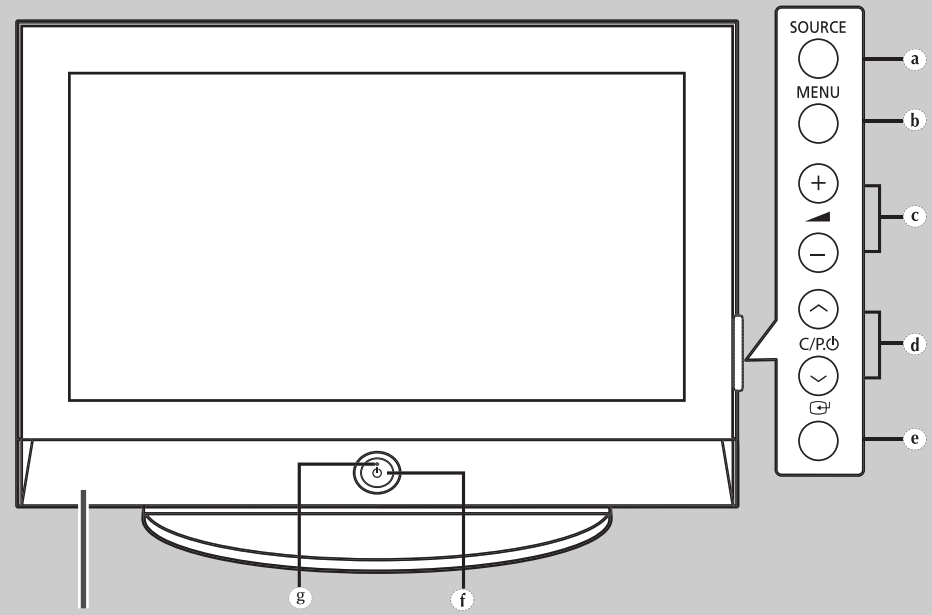
Symbols

Press Important Note

Control Panel

➢ The actual configuration of your TV may be different, depending on your model.

Front of the TV



a) SOURCE button
Select the external input source.

b) MENU button
Display the on-screen menu.

c) ◢ (+, –) buttons
Adjust the volume.

d) C/P.⏻ (∧, ∨) buttons
Select channels.

e) ⏎(ENTER) button
Confirm your choice (Store or Enter).

f) ⏻ (POWER) button
Press to turn the TV on and off.

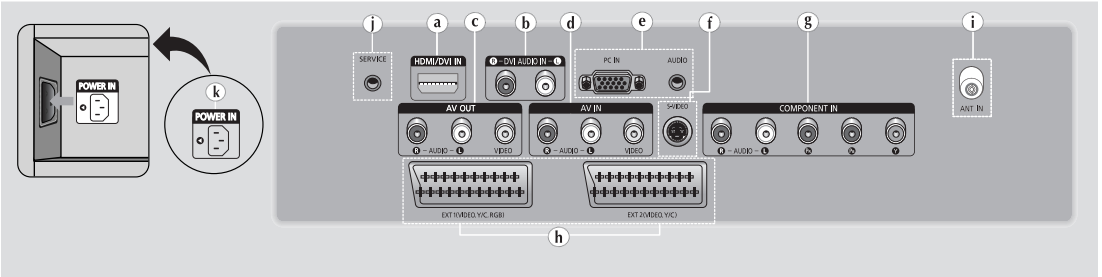
Power Indicator
- Power Off: Blue
- Power On: Off

g) Remote Control Sensor
Aim the remote control towards this spot on the TV.

➢
- You can use the **C/P.⏻** (∧, ∨) buttons to switch on the TV when it is in standby mode depending on the model.
- The ◢ (+, –) and **C/P.⏻** (∧, ∨) buttons have the same function as the ▲/▼/◀/▶ buttons on the remote control.
- If the remote control no longer works or you have misplaced it, you can use the controls on the panel of the TV.

➢ The actual configuration of your TV may be different, depending on your model.

Rear Panel



a) HDMI/DVI IN
Connect to the HDMI jack of a device with HDMI output. These inputs can also be used as a DVI connection with separate analog audio inputs. An optional HDMI/DVI cable will be necessary to make this connection. When using the optional HDMI/DVI adapter, the DVI analog audio inputs on your TV allow you to receive left and right audio from your DVI device. (Not compatible with PC)

b) DVI AUDIO IN L/R
DVI audio outputs for external devices.

c) AV OUT (VIDEO / AUDIO L/R)
Outputs for external devices.

d) AV IN (VIDEO / AUDIO L/R)
Video and audio inputs for external devices, such as a camcorder or VCR.

e) PC IN / AUDIO
Connect to the video and audio output jack on your PC.

f) S-VIDEO
Video input for external devices with an S-Video output, such as a camcorder or VCR.

g) COMPONENT IN
Video (**Y/P_B/P_R**) and audio (**AUDIO L/R**) inputs for Component.

h) EXT 1, EXT 2
Inputs or outputs for external devices, such as VCR, DVD, video game device or video disc players.

i) ANT IN (75Ω)
75Ω Coaxial connector for Aerial/Cable Network.

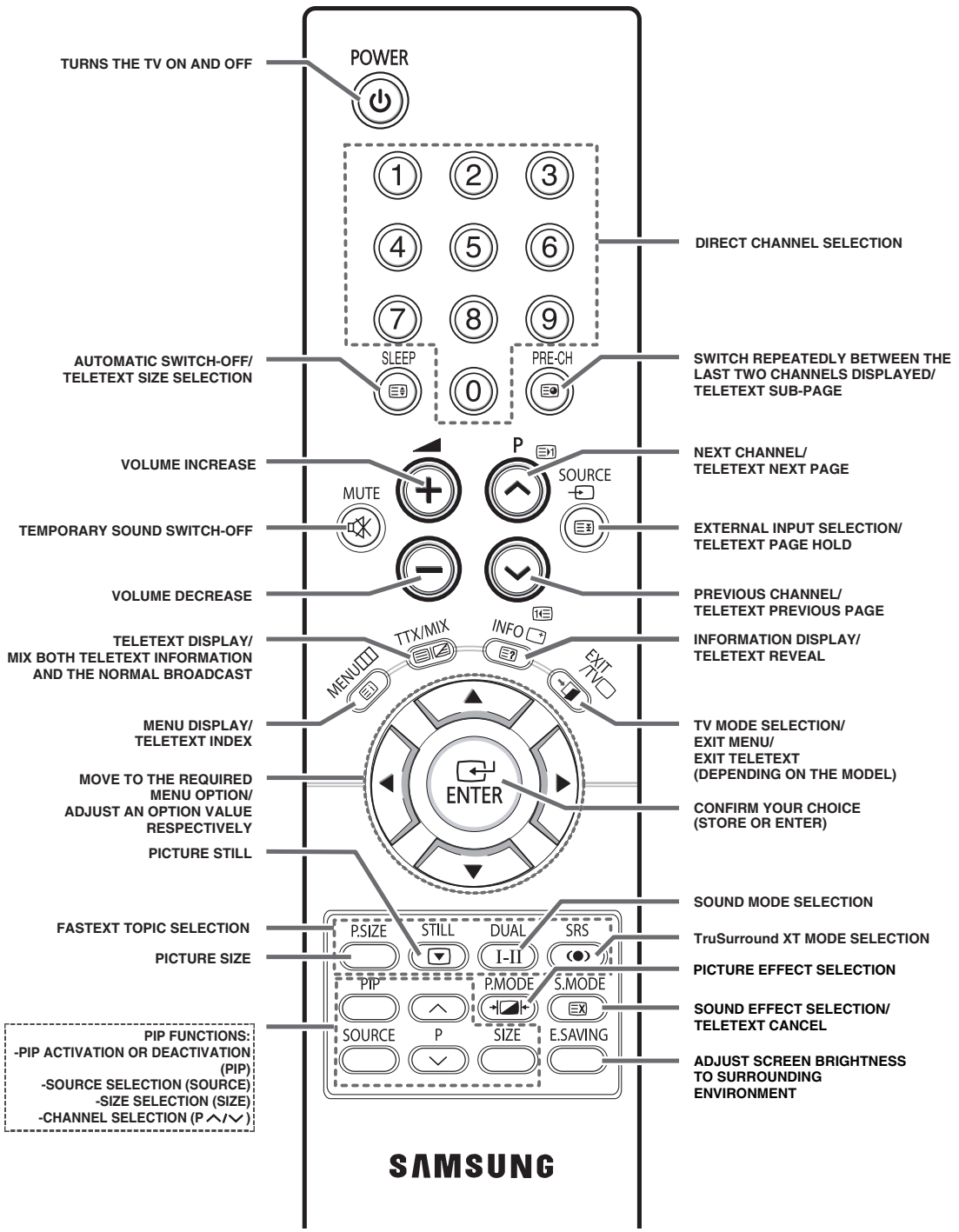
j) SERVICE
Connector for service only.

k) POWER IN
Connect the supplied power cord.

➢ For further details about connection, refer to pages 58~63.

➢ Whenever you connect an audio or video system to your television, ensure that all elements are switched off. Refer to the documentation supplied with your equipment for detailed connection instructions and associated safety precautions.

Infrared Remote Control

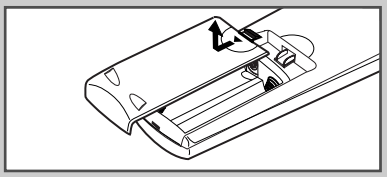


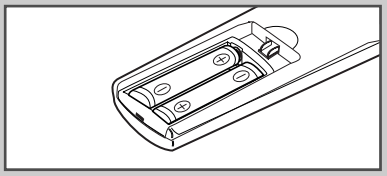
➢ *The performance of the remote control may be affected by bright light.*

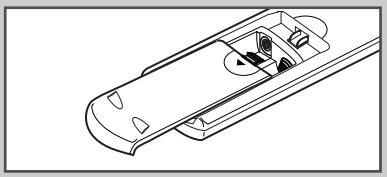
Inserting the Batteries in the Remote Control

You must insert or replace the batteries in the remote control when you:

- ***Purchase the television***
- ***Find that the remote control is no longer operating correctly***







1 Remove the cover on the rear of the remote control by pressing the symbol (▼) downwards and then pulling firmly to remove it.

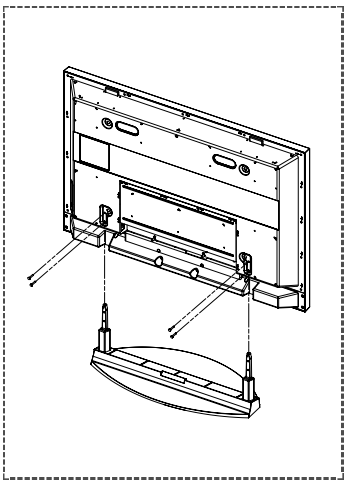
2 Insert two R03, UM4, “AAA” 1.5V or equivalent batteries taking care to respect the polarities:
- **–** on the battery against **–** on the remote control
- **+** on the battery against **+** on the remote control

3 Replace the cover by aligning it with the base of the remote control and pressing it back into place.

➢ Do not mix battery types, i.e. alkaline and manganese.

Assembling the Stand-Base

1 Assemble the PDP with the stand and firmly secure the PDP using 4 screws provided.



➢ Two or more people should carry the PDP. Never lay the PDP on the floor because of possible damage to the screen. Always store the PDP upright.

Installing the Display on the Wall Attachment Panel

➢ Refer to the correct installation guide according to your wall bracket.

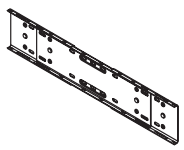
Installation Notes

- Contact a technician for installing the wall bracket.
- Samsung Electronics is not responsible for any damages to the product or harm to customers when the installation is done by the customer.
- This product is for installing on cement walls. The product may not stay in place when installed on plaster or wood.

Components

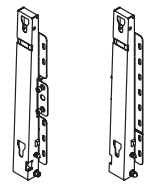
- Only use the components and accessories shipped with the product.

Wall Bracket



1

Hinge



Left: 1 Right: 1

Accessories

Plastic Hanger: 4

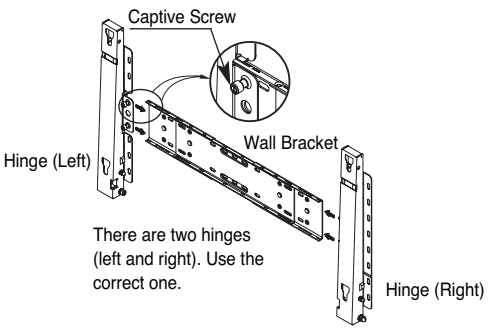
Screw ⓐ : 11

Screw ⓑ : 4

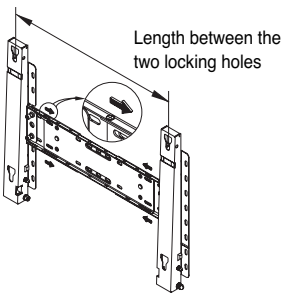
Anchor : 11

Wall Bracket Assembly

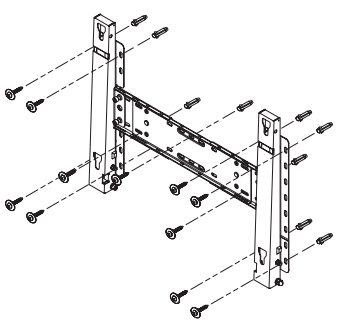
1 Insert and tighten the Captive Screw in the direction of the arrow.
When done, mount the wall bracket on the wall.



2 Before drilling into the wall, check if the length between the two locking holes at the back of the product is correct.
If the length is too short or long, loosen all or some of the 4 screws on the wall bracket to adjust the length.



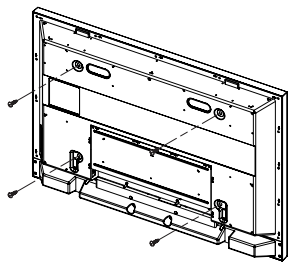
3 Check the installation diagram and mark the drill points on the wall. Use the 5.0 mm bit to drill holes deeper than 35 mm.
Fix each anchor in the corresponding hole.
Match each of the brackets and hinge holes to the corresponding anchor holes and insert and tighten the 11 screws ⓐ.



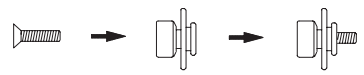
To mount the product on the wall bracket

◆ The shape of the product may vary depending on the model. (The assemblies of the plastic hanger and the screw are the same)

1 Remove the 4 screws on the back of the product.

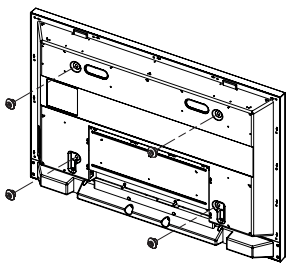


2 Insert the screw ⓑ into the plastic hanger. (See the figure below)

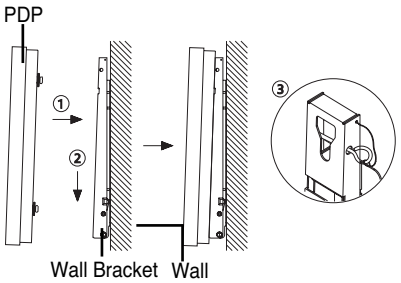


☛
- ◆ Mount the product on the wall bracket and make sure it is properly fixed to the left and right plastic hangers.
- ◆ Be careful when installing the product on the bracket as fingers can be caught in the holes.
- ◆ Make sure the wall bracket is securely fixed to the wall, or the product may not stay in place after installation.

3 Tighten the 4 screws in step 2 (plastic hanger + screw ⓑ) to the rear holes of the product.

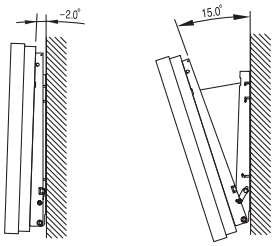


4 Remove safety pin (③) and insert the 4 product holders into the corresponding bracket holes (①). Then place the product (②) so that it is firmly fixed to the bracket. Make sure to reinsert and tighten the safety pin (③) to securely hold the product to the bracket.



Wall Bracket Angle Adjustment

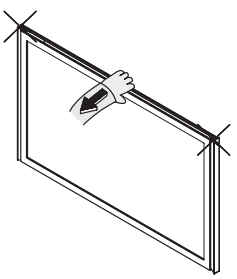
➢ Adjust the bracket angle to -2° before installing it on the wall.



1 Fix the product to the wall bracket.

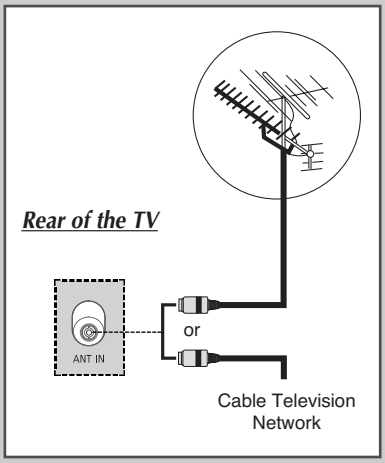
2 Hold the product at the top in the center and pull it forward (direction of the arrow) to adjust the angle. (See the figure to the right)

3 You can adjust the bracket angle between -2° and 15°.



Make sure to use the top center, and not the left or the right side of the product to adjust the angle.

Connecting to an Aerial or Cable Television Network



To view television channels correctly, a signal must be received by the set from one of the following sources:

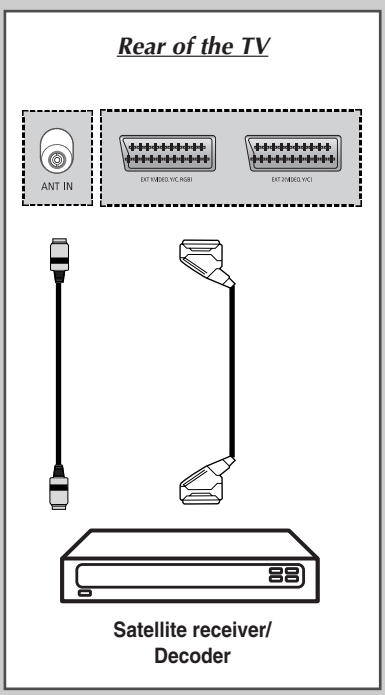
- ***An outdoor aerial***
- ***A cable television network***
- ***A satellite network***

1 In these cases, connect the aerial or network input cable to the ANT IN jack on the rear of the television.

2 If you are using an indoor aerial, you may need to turn it when tuning your television until you obtain a picture that is both sharp and clear.
For further details, refer to:
- "Storing Channels Automatically" on page 17
- "Storing Channels Manually" on page 18

➢ When installing or re-installing your TV, be sure to use the supplied coaxial antenna cable. If you connect using a different coaxial cable, there is risk of noise or interference to the screen image. (You must not use another general purpose cable. Use the 3M/5M/7M cable supplied by Samsung.)

Connecting a Satellite Receiver or Decoder



In order to watch television programmes broadcast via a satellite network, you must connect a satellite receiver to the rear of TV. Also, in order to descramble a coded transmission signal, you must connect a decoder to the rear of TV.

Using a SCART cable

Connect the receiver (or decoder) SCART cable to one of the SCART connectors on the rear of the television.

Using a coaxial cable

Connect a coaxial cable to the:
- Receiver (or Decoder) output socket.
- Television aerial input socket.

➢ If you wish to connect both a satellite receiver (or decoder) and a VCR, you should connect the:
- Receiver (or Decoder) to the VCR
- VCR to the television

Otherwise, connect the receiver (or decoder) directly to the television.

Switching Your Television On and Off

The mains lead is attached to the rear of your television.

1 Plug the mains lead into an appropriate socket.

Result: The Standby indicator on the front of the television lights up.

➢ The main voltage is indicated on the rear of the television and the frequency is 50 or 60Hz.

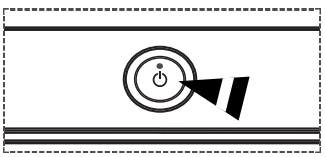
2 Press the power button on the front of the television (or **POWER** (⏻) button on the remote control) to switch the television on.

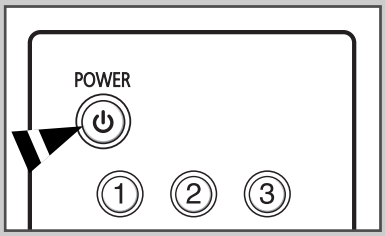
Result: The programme that you were watching last is re-selected automatically.

➢ If you have not yet stored any channels, no clear picture appears. Refer to “Storing Channels Automatically” on page 17 or “Storing Channels Manually” on page 18.

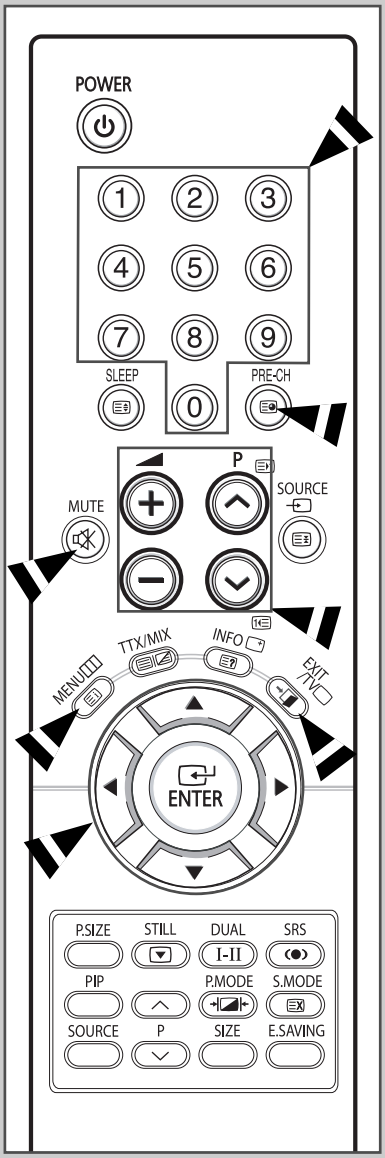
3 To switch your television off, press the power button again.

Front of the TV





Familiarizing Yourself with the Remote Control



The remote control is used mainly to:

- ***Change channels and adjust the volume.***
- ***Set up the television using the on-screen menu system.***

The following table presents the most frequently used buttons and their functions.

Button	Viewing Function	Menu Function
⊙	Used to display the next stored channel.	–
⊙	Used to display the previous stored channel.	–
⓪ to ⑨	Used to display the corresponding channels. ➢ For double digit channels, the second digit must be pushed immediately after the first. Failure to do this will result in a single digit channel being displayed.	
⊕	Used to increase the volume.	
⊖	Used to decrease the volume.	
MUTE (🔇)	Used to switch the sound off temporarily. ➢ To turn the sound back on, press this button again, or press the ⊕ or ⊖ button.	
MENU (▥)	Used to display the on-screen menu system.	Used to return to the previous menu or normal viewing.
⊙	–	Used to: ◆ Display a sub-menu containing selections for the current menu option. ◆ Increase/decrease a menu option value.
ENTER	–	Used to confirm your choice.
EXIT/TV (→▯)		Used to exit from the menu system and return to normal viewing directly.
PRE-CH	Press the **PRE-CH** button. The TV will switch to the last channel viewed. To quickly switch between two channels that are far apart, select the first channel, then use the numeric buttons to select the second channel. Then, use the **PRE-CH** button to quickly alternate between them.	

Plug & Play Feature

When the television is initially powered on, several basic customer settings proceed automatically and subsequently. The following settings are available.

1 If the television is in standby mode, press the **POWER** (⏻) button on the remote control.

Result: The message to start Plug & Play is displayed.

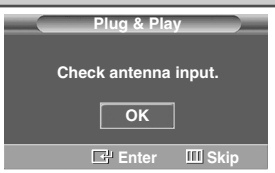
2 To start Plug & Play, press the **ENTER** (↵) button.

Result: The **Language** menu is displayed.

➢ The **Language** menu will automatically appear after several seconds, even if the **ENTER** (↵) button is not pressed.

3 Select the appropriate language by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.

Result: The message to check the connected status of the antenna is displayed.



4 Make sure that the antenna is connected to the TV. Press the **ENTER** (↵) button.

Result: The **Country** menu is displayed.

5 Select your country or area by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.

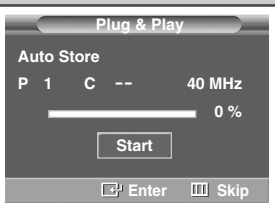
Result: The menu to select channels is displayed.

6 To start channel store, press the **ENTER** (↵) button.

Result: The search will end automatically. Channels are sorted and stored in the order which reflects their position in the frequency range (with lowest first and highest last). When this has finished, the menu to set the time will be displayed.

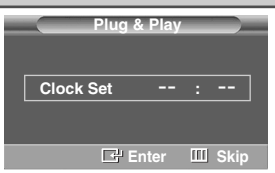
➢ To stop the search before it has finished or return to normal viewing, press the **MENU** (▥) or the **ENTER** (↵) button.

➢ Press the **ENTER** (↵) button to set the clock.

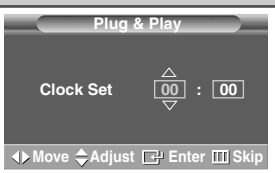


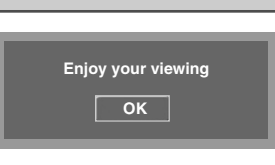
7 Press the ◀ or ▶ button to select the hour or minute. Set these by pressing the ▲ or ▼ button.

➢ You can enter the hours or minutes by using the numeric buttons on the remote control.



8 The settings are complete, and the stored channel will be activated.





Plug & Play Feature (continued)

To activate Plug & Play on the menu, follow the instructions below.

1	Press the **MENU** (▥) button. Result: The main menu is displayed.
2	Press the ▲ or ▼ button to select **Setup**. Result: The **Setup** menu is displayed.
3	Press the **ENTER** (↵) button.
4	Press the **ENTER** (↵) button again to select **Plug & Play**. Result: The message to start Plug & Play is displayed.
5	For further details on settings, refer to the previous page.

Choosing Your Language

When you start using your television for the first time, you must select the language which will be used for displaying menus and indications.

1	Press the **MENU** (▥) button. Result: The main menu is displayed.
2	Press the ▲ or ▼ button to select **Setup**. Result: The **Setup** menu is displayed.
3	Press the **ENTER** (↵) button.
4	Press the ▲ or ▼ button to select **Language**. Press the **ENTER** (↵) button. Result: The available languages are listed.
5	Select the appropriate language by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.

Storing Channels Automatically

You can scan for the frequency ranges available to you (availability depends on your country). Automatically allocated programme numbers may not correspond to actual or desired programme numbers. However you can sort numbers manually and clear any channels you do not wish to watch.

1 Press the **MENU** (☐☐☐) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Channel**.

Result: The **Channel** menu is displayed.

3 Press the **ENTER** (↵) button.

Result: The **Country** is selected.

4 Press the **ENTER** (↵) button again.

Result: The available countries are listed.

5 Select your **Country** by pressing the ▲ or ▼ button.

➢ If you have selected the **Others** option but do not wish to scan the PAL frequency range, store the channels manually ("Storing Channels Manually" on page 18).

6 Press the **ENTER** (↵) button.

7 Press the ▲ or ▼ button to select **Auto Store**.
Press the **ENTER** (↵) button.

Result: The **Auto Store** menu is displayed.

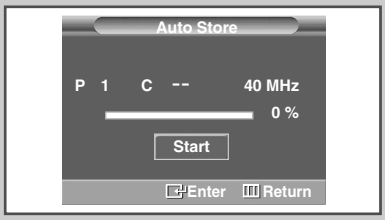
8 Press the **ENTER** (↵) button again to start the search.

Result: The search will end automatically. Channels are sorted and stored in the order which reflects their position in the frequency range (with lowest first and highest last). The programme originally selected is then displayed.

➢ To stop the search before it has finished, press the **MENU** (☐☐☐) or the **ENTER** (↵) button.

9 When the channels have been stored, you can:

- Sort them in the order required ("Sorting the Stored Channels" on page 21).
- Clear a channel ("Skipping Unwanted Channels" on page 20).
- Fine-tune channel reception if necessary ("Fine Tuning Channel Reception" on page 25).
- Assign a name to the stored channels ("Assigning Names to Channels" on page 22).
- Activate/deactivate the Digital NR (**N**oise **R**eduction) feature ("Using the Digital NR (**N**oise **R**eduction) Feature" on page 40).
- Activate/deactivate the LNA (**L**ow **N**oise **A**mplifier) feature ("Using the LNA (Low Noise Amplifier) Feature" on page 24).



Storing Channels Manually

You can store television channels, including those received via cable networks.

When storing channels manually, you can choose:

- *Whether or not to store each of the channels found.*
- *The programme number of each stored channel which you wish to identify.*

---

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

---

2 Press the ▲ or ▼ button to select **Channel**.

Result: The **Channel** menu is displayed.

---

3 Press the **ENTER** (↵) button.

---

4 Press the ▲ or ▼ button to select **Manual Store**.
Press the **ENTER** (↵) button.

---

5 If necessary, select the broadcasting standard required.
Press the ▲ or ▼ button to select **Colour System**.
Press the **ENTER** (↵) button.

---

6 Select the required colour standard by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.

Result: The following options are available. (depending on the model)

AUTO - PAL - SECAM - NTSC 4.43

---

7 Press the ▲ or ▼ button to select **Sound System**.
Press the **ENTER** (↵) button.

---

8 Select the required sound standard by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.

Result: The following options are available.

BG - DK - I - L

Storing Channels Manually (continued)

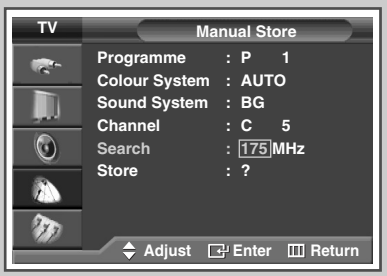
9 If you know the number of the channel to be stored, see the following steps.

- Press the ▲ or ▼ button to select **Channel**. Press the **ENTER** (↵) button.
- Press the ▲ or ▼ button to select **C** (Air channel) or **S** (Cable channel).
- Press the ▶ button.
- Press the ▲ or ▼ button to select the required number. Press the **ENTER** (↵) button.

➢ If there is abnormal sound or no sound, re-select the sound standard required.

10 If you do not know the channel numbers, select **Search** by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button. Press the ▲ or ▼ button to start the search. Press the **ENTER** (↵) button.

Result: The tuner scans the frequency range until the first channel or the channel that you selected is received on your screen.



11 To assign a programme number to a channel, select **Programme** by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.

12 Press the ▲ or ▼ button until you find the correct number. Press the **ENTER** (↵) button.

13 To store the channel and associated programme number, select **Store** by pressing the ▲ or ▼ button. Set to **OK** by pressing the **ENTER** (↵) button.

14 Repeat steps **9** to **13** for each channel to be stored.

☛ ***Channel mode***

- **P** (Programme mode): When completing tuning, the broadcasting stations in your area have been assigned to position numbers from P00 to P99. You can select a channel by entering the position number in this mode.
- **C** (Air channel mode): You can select a channel by entering the assigned number to each air broadcasting station in this mode.
- **S** (Cable channel mode): You can select a channel by entering the assigned number for each cable channel in this mode.

Skipping Unwanted Channels

You can exclude the channels of your choice from the channel scan operation. When you scan through the stored channels, those that you have chosen to skip are not displayed.
All channels that you do not specifically choose to skip are displayed during scanning.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Channel**.

Result: The **Channel** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Add/Delete**.
Press the **ENTER** (↵) button.

Result: The **Add/Delete** menu is displayed with the current channel selected.

5 Press the **P** ∧ or ∨ button to delete or add the required channel.
Press the **ENTER** (↵) button.

6 Repeat step **5** for each channel to be deleted or added.

Sorting the Stored Channels

This operation allows you to change the programme numbers of stored channels. This operation may be necessary after using auto store.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Channel**.

Result: The **Channel** menu is displayed.

3 Press the **ENTER** (↵) button.

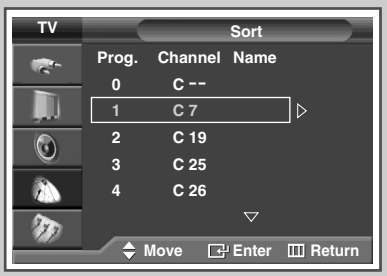
4 Press the ▲ or ▼ button to select **Sort**.
Press the **ENTER** (↵) button.

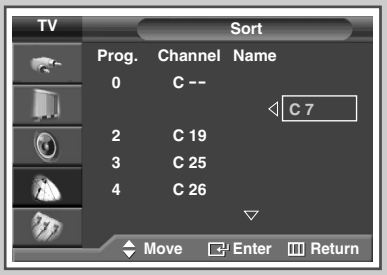
5 Select the channel that you wish to move by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.

6 Select the number of the programme to which the channel is to be moved by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

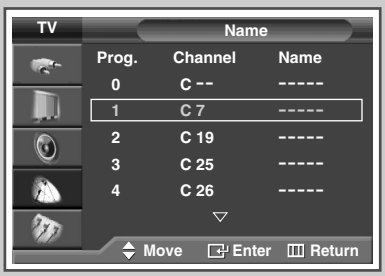
Result: The channel is moved to its new position and all other channels are shifted accordingly.

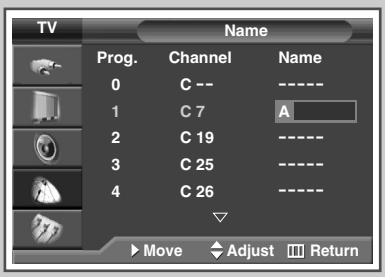
7 Repeat steps **5** to **6** until you have moved all the channels to the required programme numbers.





Assigning Names to Channels





Channel names will be assigned automatically when channel information is broadcast. These names can be changed, allowing you to assign new names.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Channel**.

Result: The **Channel** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Name**.
Press the **ENTER** (↵) button.

Result: The **Name** menu is displayed with the current channel selected.

5 Press the ▲ or ▼ button to select the channel to be assigned to a new name. Press the **ENTER** (↵) button.

Result: Arrow indications are displayed around the name box.

6 Press the ▲ or ▼ button to select a letter (A~Z), a number (0~9), or a symbol. Move on to the previous or next letter by pressing the ◄ or ► button.

7 Press the **ENTER** (↵) button.

8 Repeat steps **5** to **7** for each channel to be assigned to a new name.

Locking the Channel

This feature allows you to prevent unauthorized users, such as children, from watching unsuitable programmes by muting out video and audio. Child Lock cannot be released using front panel buttons. Only remote control can release the Child Lock setting, so keep the remote control away from children.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Setup**.

Result: The **Setup** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Child Lock**.
Press the **ENTER** (↵) button.

5 Press the **ENTER** (↵) button again.
Select **On** by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

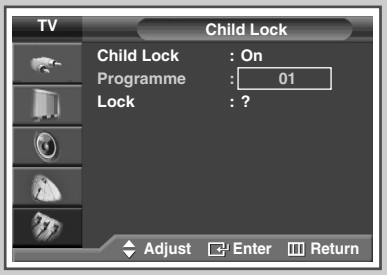
6 Press the ▲ or ▼ button to select **Programme**.
Press the **ENTER** (↵) button.

7 Select the number of programme to which the channel is to be locked by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

8 Press the ▲ or ▼ button to select **Lock**.
Select **Locked** by pressing the **ENTER** (↵) button.

Result: The selected channel is locked and marked with the 🔒 symbol.

➢
- A Blue screen is displayed when the **Child Lock** is activated.
- To unlock the Channel lock, press the **ENTER** (↵) button again. The locked channel is unlocked.
- When a channel is locked, the channel is marked with the 🔒 symbol on the left side in the Channel OSD (On Screen Display).



Using the LNA (Low Noise Amplifier) Feature

This function is very useful in the situation that the TV is used in weak signal. LNA amplifies the TV signal in the weak signal area, a low-noise preamplifier boosts the incoming signal.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Channel**.

Result: The **Channel** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **LNA**.
Press the **ENTER** (↵) button.

5 Select **Off** or **On** by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

➢
- If the picture is noisy with the **LNA** set to **On**, select **Off**.
- **LNA** setting is to be made for each channel.

Fine Tuning Channel Reception

If the reception is clear, you do not have to fine tune the channel, as this is done automatically during the search and store operation. If the signal is weak or distorted, you may have to fine tune the channel manually.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Channel**.

Result: The **Channel** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Fine Tune**.
Press the **ENTER** (↵) button.

Result: The horizontal bar is displayed.

5 To obtain a sharp and clear picture and good sound quality, press the ◄ or ► button until you reach the optimal setting.

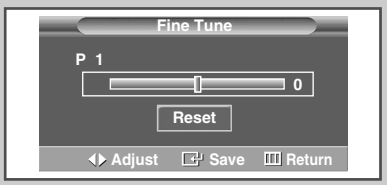
6 To store the fine tuning setting in the TV's memory, press the **ENTER** (↵) button.

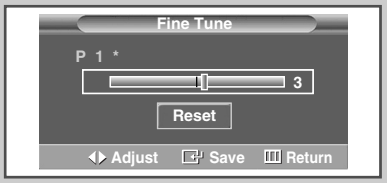
Result: The programme number changes to Red and is marked with a "*".

7 To reset the fine tuning to **0**, select **Reset** by pressing the ▲ or ▼ button then press the **ENTER** (↵) button.

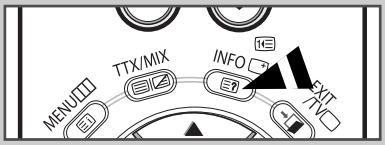
➢ If you are unable to fine tune a channel, check that the Colour System and Sound System settings are correct.

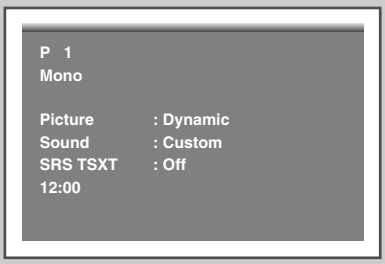
➢ Fine Tune Store will change the colour of the Channel OSD (On Screen Display) from White to Red and add the "*" mark.





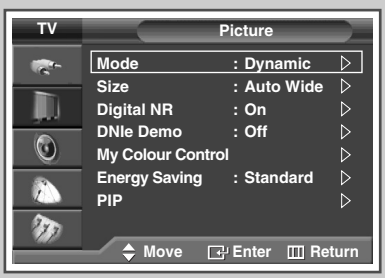
Displaying Information

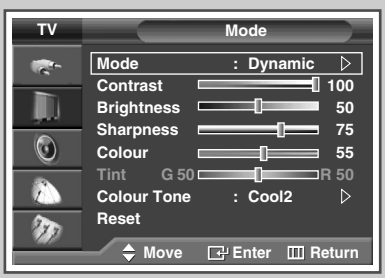


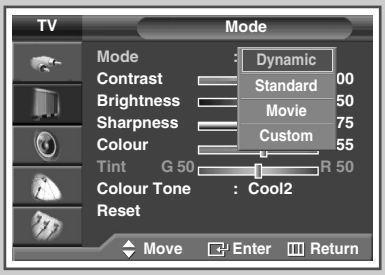


You can view the channel information and setting status you have selected by pressing the "INFO ( )" button on the remote control.
The information displayed varies according to the selected source.

Changing the Picture Standard







You can select the type of picture which best corresponds to your viewing requirements.

1	Press the **MENU** ( ) button. Result: The main menu is displayed.
2	Press the ▲ or ▼ button to select **Picture**. Result: The **Picture** menu is displayed.
3	Press the **ENTER** ( ) button. Result: The **Mode** is selected.
4	Press the **ENTER** ( ) button again. Result: The **Mode** menu is displayed.
5	Press the **ENTER** ( ) button. Result: The following options are available. **Dynamic - Standard - Movie - Custom**
6	Select the required option by pressing the ▲ or ▼ button.
7	Press the **ENTER** ( ) button.

➢ You can also set these options simply by pressing the **P.MODE** (: Picture Mode) button on the remote control.

Customizing the Picture Settings

Your television has several setting options that allow you to control the picture quality.

1 Press the **MENU** (☐☐☐) button.
Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Picture**.
Result: The **Picture** menu is displayed.

3 Press the **ENTER** (↵) button.
Result: The **Mode** is selected.

4 Press the **ENTER** (↵) button again.
Result: The **Mode** menu is displayed.

5 Press the **ENTER** (↵) button.
Result: The following options are available.
Dynamic - **Standard** - **Movie** - **Custom**

6 Select the required option by pressing the ▲ or ▼ button.

7 Press the **ENTER** (↵) button.

8 Select the required option by pressing the ▲ or ▼ button.
Result: The following options are available.
- **Contrast** - **Brightness** - **Sharpness** - **Colour** - **Tint** (NTSC only)
- **Contrast** - **Brightness** : PC or HDMI Mode.

9 Press the **ENTER** (↵) button.
Result: The horizontal bar is displayed.
Press the ◄ or ► button until you reach the optimal setting.

➢
- Press the ▲ or ▼ button to select other option(s).
- The settings values may vary depending on the input source. (ex. RF, Video, Component, PC, or HDMI.)

10 Press the **MENU** (☐☐☐) button to return to **Mode** menu.
Press the ▲ or ▼ button to select **Colour Tone**.
Press the **ENTER** (↵) button.

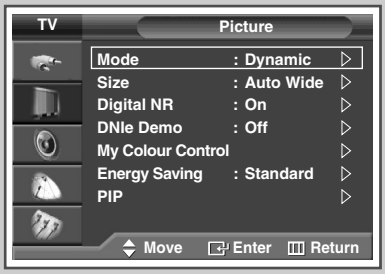
11 Select the required option by pressing the ▲ or ▼ button.
Result: The following options are available.
Cool2 - **Cool1** - **Normal** - **Warm1** - **Warm2**

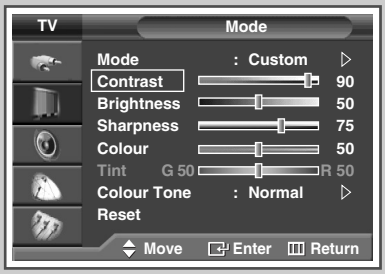
12 Press the **ENTER** (↵) button.

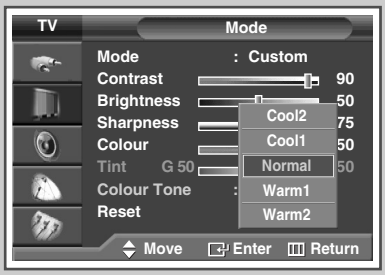
13 To return the factory defaults, select **Reset** by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.
Result: The previously adjusted settings will be reset to the factory defaults.

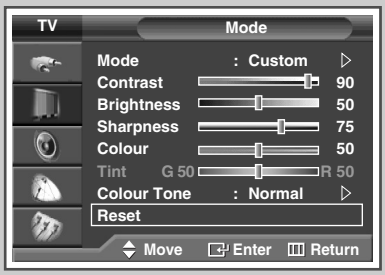
➢ The reset function is set for each mode (**Dynamic**, **Standard**, **Movie**, or **Custom**).

➢ The reset function is also set for each **Colour Tone** (**Cool2**, **Cool1**, **Normal**, **Warm1**, or **Warm2**).



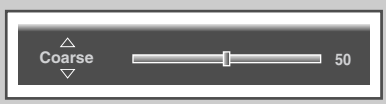


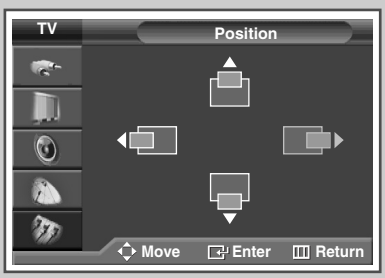




Setting the Picture (PC Mode)

➢ Preset to the **PC** mode by pressing the **SOURCE** (⏎) button.





1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Setup**.

Result: The **Setup** menu is displayed.

3 Press the **ENTER** (⏎) button.

4 Press the ▲ or ▼ button to select **PC**.
Press the **ENTER** (⏎) button.

Result: The **PC** menu is displayed.

5 Press the ▲ or ▼ button to select **Image Lock.**
Press the **ENTER** (⏎) button.

6 Press the ▲ or ▼ button to select the option (**Coarse** or **Fine**) to be adjusted. Press the **ENTER** (⏎) button.

Result: The horizontal bar is displayed.
Press the ◄ or ► button until you reach the optimal setting.

➢ Press the ▲ or ▼ button to select other option(s).

7 Press the **ENTER** (⏎) button.

8 Press the **MENU** (▥) button.

Result: The **PC** menu is displayed again.

9 Press the ▲ or ▼ button to select **Position**.
Press the **ENTER** (⏎) button.

10 Adjust the position by pressing the ▲, ▼, ◄, or ► button.

11 Press the **ENTER** (⏎) button.

Setting the Picture (PC Mode) (continued)

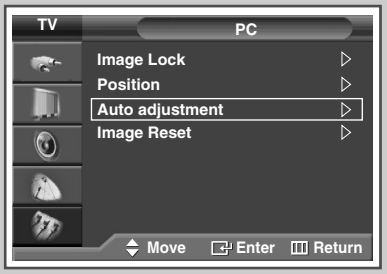
➢ Preset to the **PC** mode by pressing the **SOURCE** (⏎) button.

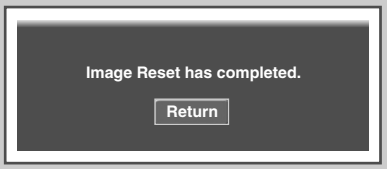
12 Press the ▲ or ▼ button to select **`Auto adjustment`**.
Press the **ENTER** (⏎) button.

Result: The screen quality and position are automatically reset. The settings are all finished, and the TV will automatically return to the previous picture.

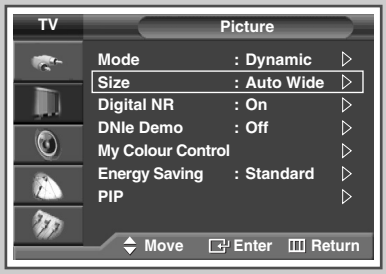
13 To return the factory defaults, select **`Image Reset`** by pressing the ▲ or ▼ button. Press the **ENTER** (⏎) button.

Result: The previously adjusted settings will be reset to the factory defaults.

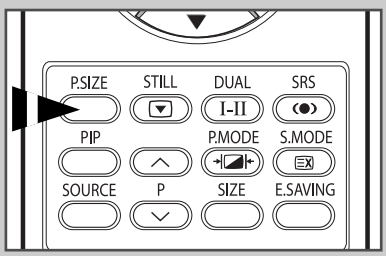




Selecting the Picture Size



PC to HDMI Mode



You can select the picture size which best corresponds to your viewing requirements.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Picture**.

Result: The **Picture** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Size**.
Press the **ENTER** (↵) button.

5 Select the required option by pressing the ▲ or ▼ button.

Result: The following options are available.

- **Auto Wide** : Expanding and pulling up the picture from **4:3** to **16:9** ratio.
- **Wide** : Sets the picture to **16:9** wide mode.
- **Wide 4:3** : Magnify the size of the picture more than **4:3**. Move the screen up/down using the ▲ or ▼ button after selecting the ⇕ by pressing the ▶ or **ENTER** (↵) button.
- **Panorama** : Sets the picture to the wide aspect ratio of a panoramic picture.
- **Zoom** : Magnify the size of the picture vertically on screen.
- **4:3** : Sets the picture to **4:3** normal mode.

6 Press the **ENTER** (↵) button.

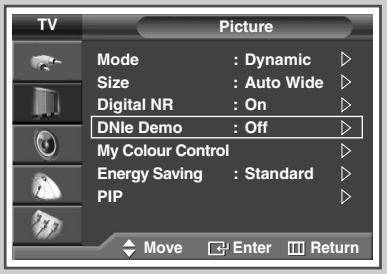
➢
- You can select these options simply by pressing the **P.SIZE** button on the remote control.
- If you change the picture size when PIP is On, PIP will automatically be turned Off.
- Depending on the input source, the **P.SIZE** options may vary.

Positioning and Sizing the screen using Zoom

➢
- Resizing the screen using the **Zoom** enables the positioning and sizing of the screen to up/down direction using the ▲ or ▼ button as well as the screen size.
- Move the screen up/down using the ▲ or ▼ button after selecting the ⇕ by pressing the ◀ or ▶ button.
- Resize the screen vertically using the ▲ or ▼ button after selecting the ↕ by pressing the ◀ or ▶ button.
  (Pressing the ▲ button extends it upward and pressing the ▼ button extends it downward.)
- Screen enlargement operates only in TV/Video/S-Video/ Component input modes.
- PC/HDMI modes prevent the screen enlargement function.

Viewing the DNIe Demonstration

This TV includes the DNIe function so as to provide a high visual quality.
If you set DNIe Demo to On, you can view an applied DNIe and a normal picture on the screen, for demonstration purposes. Using this function, you can view the difference in the visual quality.



1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Picture**.

Result: The **Picture** menu is displayed.

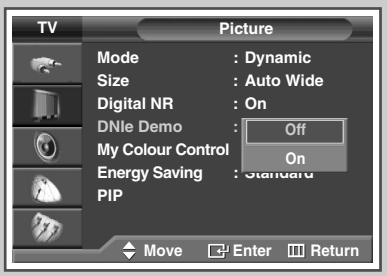
3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **DNIe Demo**.
Press the **ENTER** (↵) button.

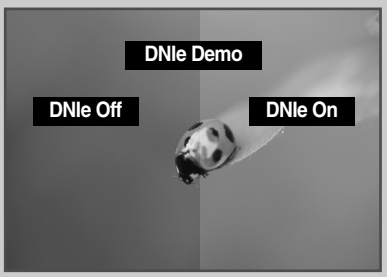
5 Select **Off** or **On** by pressing the ▲ or ▼ button.

Result: The following options are available.

- **On** : Switches on the **DNIe Demo** mode.
- **Off** : Switches off the **DNIe Demo** mode.



6 Press the **ENTER** (↵) button.

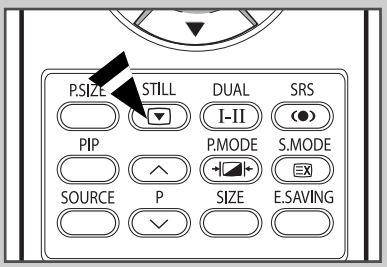


➢ **DNIe™ (D**igital **N**atural **I**mage **e**ngine) DNIe

This feature brings you more detailed image with 3D noise reduction, detail enhancement, contrast enhancement and white enhancement. New image compensation Algorithm gives brighter, clearer, more detailed image to you.
DNIe™ technology will fit every signal into your eyes.

Freezing the Current Picture

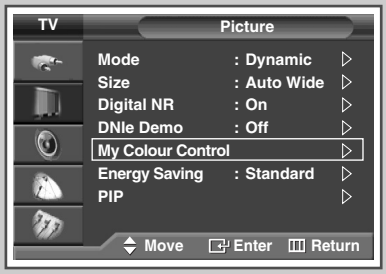
You can freeze the picture when watching a television programme simply by pressing the "STILL" button. To return to normal viewing, press it again.

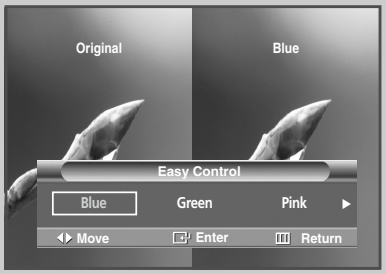


➢ In the PIP mode, the main and sub pictures are stilled at the same time.

➢ This function will automatically cancel after 5 minutes.

Setting the My Colour Control (Easy Control)





This feature allows you to adjust colours according to your preferences, by adjusting skin, sky, and grass tones using the predefined settings (Blue, Green, Pink, Standard, and Custom) without affecting other colours on the screen.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Picture**.

Result: The **Picture** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **My Colour Control**.
Press the **ENTER** (↵) button.

Result: The **Easy Control** is selected.

5 Press the **ENTER** (↵) button again.

Result: The following options are available.

- **Blue**
  Emphasizing clear blues.
- **Green**
  Emphasizing mild greens.
- **Pink**
  Emphasizing warm skin colours.
- **Standard**
  Standard picture.
- **Custom**
  Changing the settings in the **Detail Control** menu will automatically set to **Custom** (see next page).

6 Select the required option by pressing the ◀ or ▶ button.

Result: The original picture (before adjustment) is shown on the left side, while the selected mode is shown on the right side.

7 Press the **ENTER** (↵) button.

➢
- Depending on the input source, this feature may not operate.
- When running the My Colour Control feature, the current picture is captured as a still image before being displayed on the screen.
- You cannot use this function, when PIP is On.

Setting the My Colour Control (Detail Control)

This setting can be adjusted to suit your personal preferences.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Picture**.

Result: The **Picture** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **My Colour Control**.
Press the **ENTER** (↵) button.

5 Press the ▲ or ▼ button to select **Detail Control**.
Press the **ENTER** (↵) button.

6 Select the required option (**Pink**, **Green**, or **Blue**) by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.

7 Press the ◄ or ► button until you reach the optimal setting.

Result: Changing the adjustment value will refresh the adjusted screen.

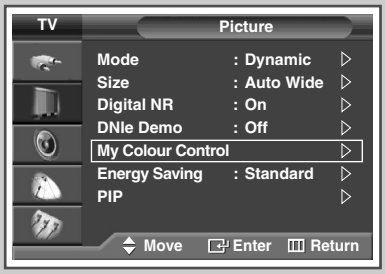
➢ Press the ▲ or ▼ button to select other option(s).

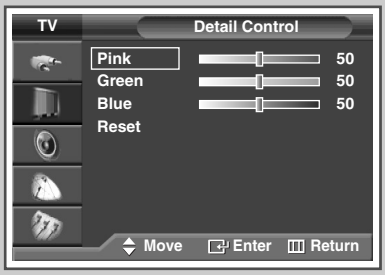
8 Press the **MENU** (▥) button.

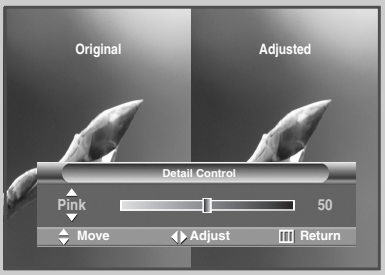
Result: The **Detail Control** menu is displayed again.

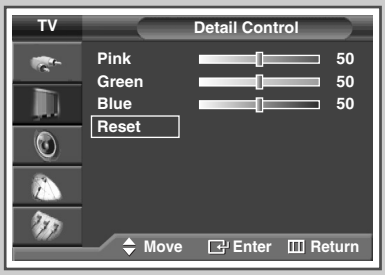
9 To return the factory defaults, select **Reset** by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.

Result: The previously adjusted colours will be reset to the factory defaults.









Setting the Blue Screen

If no signal is being received or the signal is very weak, a blue screen automatically replaces the noisy picture background. If you wish to continue viewing the poor picture, you must set the Blue Screen mode to Off.

1	Press the **MENU** (▥) button. Result: The main menu is displayed.
2	Press the ▲ or ▼ button to select **Setup**. Result: The **Setup** menu is displayed.
3	Press the **ENTER** (↵) button.
4	Press the ▲ or ▼ button to select **Blue Screen**. Press the **ENTER** (↵) button.
5	Select **Off** or **On** by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.

➢ **Blue Screen** is displayed while there is no signal from the external device in the external mode, regardless of the **Blue Screen** Setting.

Using the Colour Weakness Enhancement Feature

This feature adjusts the red, green, or blue colour to enhance the picture according to the user's particular colour weakness.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Setup**.

Result: The **Setup** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Colour Weakness**.
Press the **ENTER** (↵) button.

Result: The **Colour Weakness** menu is selected.

5 Press the **ENTER** (↵) button again.
Press the ▲ or ▼ button to select **On**.
Press the **ENTER** (↵) button.

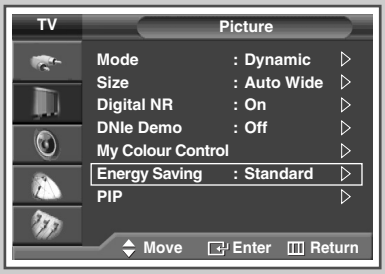
6 Select the required option (**Red**, **Green**, or **Blue**) by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.

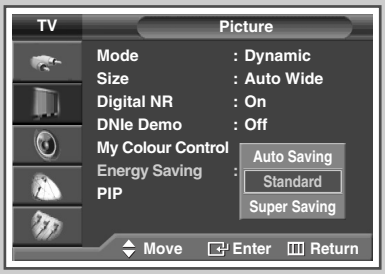
Result: The horizontal bar is displayed.
Press the ◄ or ► button until you reach the optimal setting.

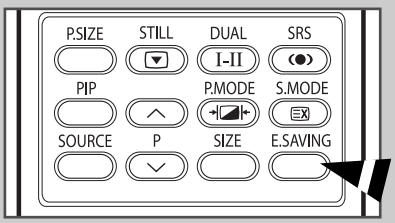
➢ Press the ▲ or ▼ button to select other option(s).

7 Press the **ENTER** (↵) button.

Using the Energy Saving Feature







This feature adjusts the screen brightness automatically depending on the surrounding lighting conditions.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Picture**.

Result: The **Picture** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Energy Saving**.
Press the **ENTER** (↵) button.

5 Select the required option by pressing the ▲ or ▼ button.

Result: The following options are available.

- **Auto Saving:** Automatically adjusts to the surrounding illumination.
- **Standard:** Operates in standard mode regardless of the surrounding illumination.
- **Super Saving:** Enters maximum power saving mode regardless of the surrounding illumination.

6 Press the **ENTER** (↵) button.

➢ This feature is not available when the input source is in PC or HDMI mode.

➢ You can select these options by simply pressing the **E.SAVING** button on the remote control.

Viewing the Picture in Picture (PIP)

You can display a sub picture within the main picture of a TV program or external A/V devices. In this way you can watch TV program or monitor the video input from any connected devices while watching TV or other video input.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Picture**.

Result: The **Picture** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **PIP**.
Press the **ENTER** (↵) button.

Result: The **PIP** is selected.

5 Press the **ENTER** (↵) button again.
To activate, set **PIP** to **on** by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

6 Press the ▲ or ▼ button to select **Source**.
Press the **ENTER** (↵) button.

Result: The following options are available.

TV - Ext.1 - Ext.2 - AV - S-Video

7 Select a source of the sub picture by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

8 Press the ▲ or ▼ button to select **Swap**.
Press the **ENTER** (↵) button.

Result: The main picture and sub picture are interchanged.

➢ You cannot use the Swap function for PC, HDMI or COMP.

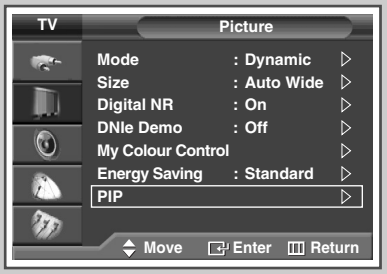
9 Press the ▲ or ▼ button to select **Size**.
Press the **ENTER** (↵) button.

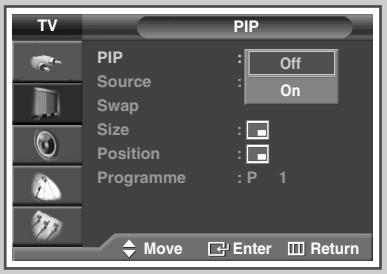
Result: The following options are available.

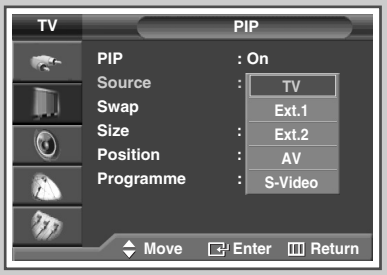
(Large) – (Double Window) – (Double Wide)

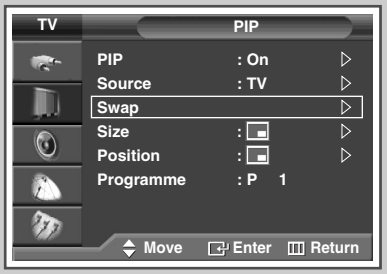
➢ The Double Window or Double Wide mode can not be selected in **PC** or **HDMI** mode.

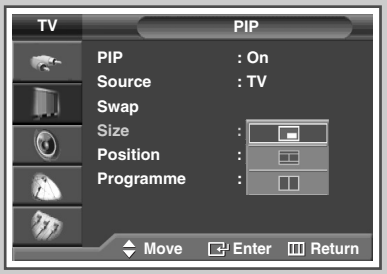
10 Select a size of the sub picture by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.



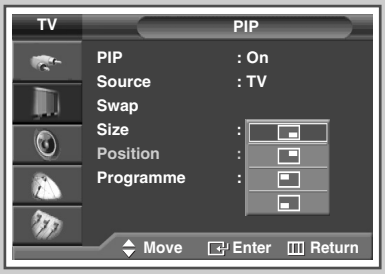


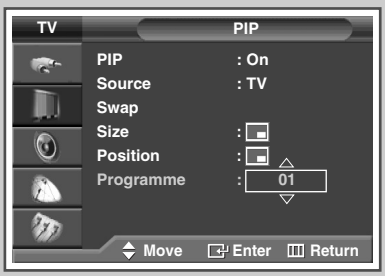






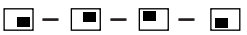
Viewing the Picture in Picture (PIP) (continued)





11 Press the ▲ or ▼ button to select **Position**.
Press the **ENTER** (↵) button.

Result: The following options are available.



➢ The **Position** menu is available when the **Size** is large (▣) mode.

12 Select a position of the sub picture by pressing the ▲ or ▼ button. Press the **ENTER** (↵) button.

13 Press the ▲ or ▼ button to select **Programme**.
Press the **ENTER** (↵) button.

14 Select the channel that you want to view through sub picture by pressing the ▲ or ▼ button.

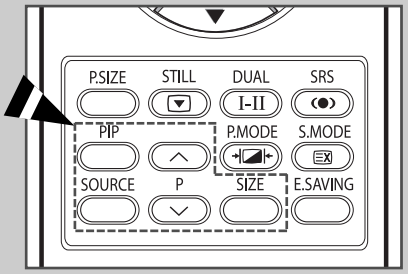
➢ When the **Source** is set to **TV**, you can select the channel of the sub-picture.

➢ If the sub picture receives no signal and the main picture is output from a Component, PC or HDMI signal, the sub picture will be blue. If the main picture is output from a Video signal, the sub picture will be black.

15 Press the **ENTER** (↵) button.

Viewing the Picture in Picture (PIP) (continued)

Easy functions of the remote control.



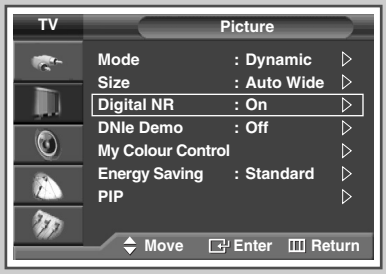
Buttons	Feature
PIP	Used to activate or deactivate the PIP function directly.
SOURCE	Used to assign a source of the sub picture (**TV**, **Ext.1**, **Ext.2**, **AV**, or **S-Video**).
SIZE	Used to select a size of the sub picture (Large), (Double Window), or (Double Wide)).
**P / **	Used to select a channel of the sub picture.

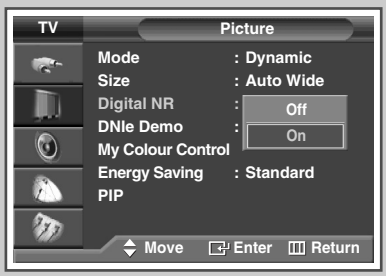
Table of PIP Settings

X - This PIP combination is not available.
O - This PIP combination is available.

Sub \ Main	TV	Ext.1	Ext.2	AV	S-Video	Component	PC	HDMI
TV	X	O	O	O	O	O	O	O
Ext.1	O	X	O	O	O	O	O	O(RGB Excluded)
Ext.2	O	O	X	O	O	O	O	O
AV	O	O	O	X	O	O	O	O
S-Video	O	O	O	O	X	O	O	O
Component	X	X	X	X	X	X	X	X
PC	X	X	X	X	X	X	X	X
HDMI	X	X	X	X	X	X	X	X

Using the Digital NR (Noise Reduction) Feature





If the signal received by your television is weak, you can activate this feature to help reduce any static and ghosting that may appear on the screen.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Picture**.

Result: The **Picture** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Digital NR**.
Press the **ENTER** (↵) button.

5 Select **Off** or **On** by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

Preventing Screen Burn-in

To reduce the possibility of screen burn, this unit is equipped with screen burn prevention technology. This technology enables you to set picture movement up/down (Vertical Line) and side to side (Horizontal Dot). The Time setting allows you to program the time between movement of the picture in minutes.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Setup**.

Result: The **Setup** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Screen Burn Protection**.
Press the **ENTER** (↵) button.

Result: The **Screen Burn Protection** menu is displayed with the **Pixel Shift** selected.

5 Press the **ENTER** (↵) button again.

Result: The **Pixel Shift** menu is selected.

6 Press the **ENTER** (↵) button.
Select **On** by pressing the ▲ or ▼ button for making the screen move per regular hour and preventing the residual image.
Press the **ENTER** (↵) button.

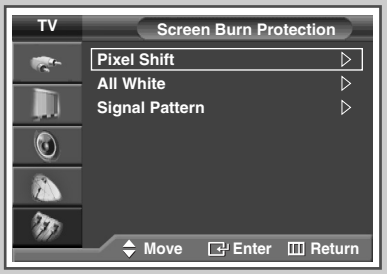
➢ **Pixel Shift**: Using this function, you can minutely move pixels on the PDP in horizontal or vertical direction to minimize after image on the screen.

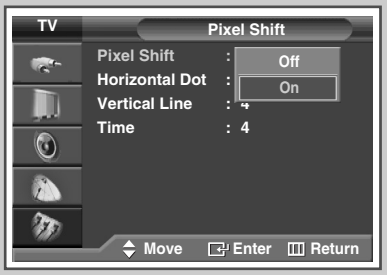
7 Select the required option (**Horizontal Dot**, **Vertical Line**, or **Time**) by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

8 Press the ▲ or ▼ button until you reach the optimal setting.
Press the **ENTER** (↵) button.

➢ Optimum condition for pixel shift;

Horizontal Dot	**2**
Vertical Line	**4**
Time(minute)	**4**





Reducing the Effects of Screen Burn

If screen burn has occurred, you can select a white screen or signal pattern (rolling screen) to help remove screen burn artifacts.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Setup**.

Result: The **Setup** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Screen Burn Protection**. Press the **ENTER** (↵) button.

Result: The **Screen Burn Protection** menu is displayed.

5 Press the ▲ or ▼ button to select the option **(All White** or **Signal Pattern)**. Press the **ENTER** (↵) button.

- **All White**: This function helps remove after images on the screen by changing the colour of pixels to white. Use this function when there are remaining after images or symbols on the screen especially when you displayed a still image on the screen for a long time.
- **Signal Pattern**: This function helps remove after images on the screen by moving all the pixels on the PDP according to a pattern. Use this function when there are remaining after images or symbols on the screen especially when you displayed a still image on the screen for a long time.

6 Press the **ENTER** (↵) button to cancel the currently selected function.

- To remove after images on the screen, use either "**All White**" or "**Signal Pattern**" function.
  Although both of the two functions remove after images on the screen, "**Signal Pattern**" is more effective.
- The after image removal function has to be executed for a long time (approximately 1 hour) to effectively remove after images on the screen.
  If after image is not improved after the execution of the function, repeat the function again.

Changing the Sound Standard

You can select the type of special sound effect to be used when watching a given broadcast.

1 Press the **MENU** ( ) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Sound**.

Result: The **Sound** menu is displayed.

3 Press the **ENTER** ( ) button.

Result: The **Mode** is selected.

4 Press the **ENTER** ( ) button again.

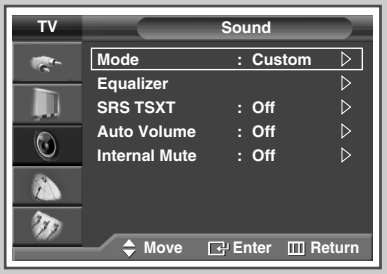
5 Select the required option by pressing the ▲ or ▼ button.

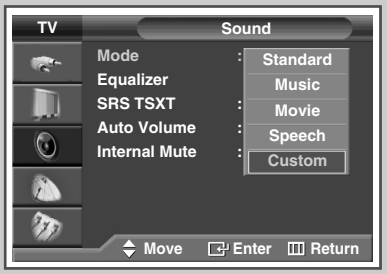
Result: The following options are available.

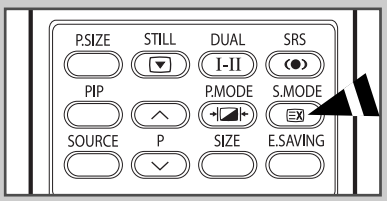
Standard - Music - Movie - Speech - Custom

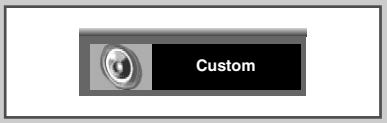
6 Press the **ENTER** ( ) button.

➢ You can select these options by simply pressing the **S.MODE** (Sound Mode) button on the remote control.

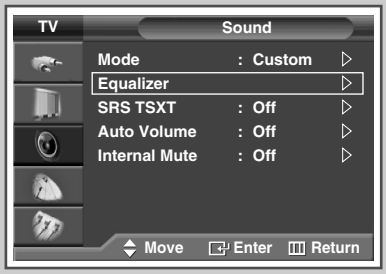


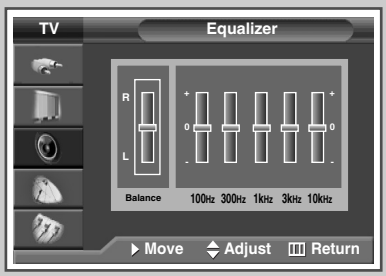






Customizing the Sound Settings





Your television has several settings which allow you to control the sound quality.

1 Press the **MENU** (☐☐☐) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Sound**.

Result: The **Sound** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Equalizer**.
Press the **ENTER** (↵) button.

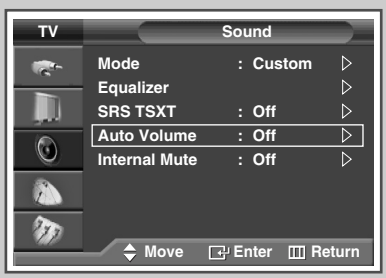
Result: The **Equalizer** menu is displayed.

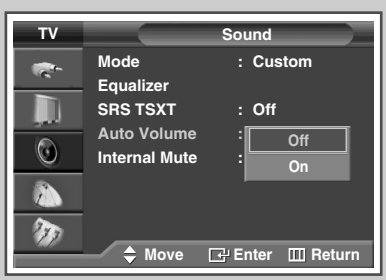
5 Select the required option (balance or equalizer) by pressing the ◀ or ▶ button.

6 Press the ▲ or ▼ button until you reach the optimal setting.
Press the **ENTER** (↵) button.

➢ If you make any changes to the sound settings, the sound standard is automatically switched to **Custom**.

Adjusting the Volume Automatically





Each broadcasting station has its own signal conditions, and so it is not easy for you to adjust the volume every time the channel is changed. This feature lets you automatically adjust the volume of the desired channel by lowering the sound output when the modulation signal is high or by raising the sound output when the modulation signal is low.

1 Press the **MENU** (☐☐☐) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Sound**.

Result: The **Sound** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Auto Volume**.
Press the **ENTER** (↵) button.

5 Select **Off** or **On** by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

Setting the TruSurround XT

TruSurround XT is a patented SRS technology that solves the problem of playing 5.1 multichannel content over two speakers. TruSurround delivers a compelling, virtual surround sound experience through any two-speaker playback system, including internal television speakers. It is fully compatible with all multichannel formats.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Sound**.

Result: The **Sound** menu is displayed.

3 Press the **ENTER** (↵) button.

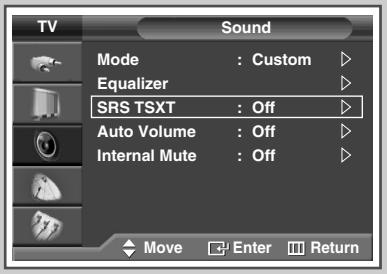
4 Press the ▲ or ▼ button to select **SRS TSXT**.
Press the **ENTER** (↵) button.

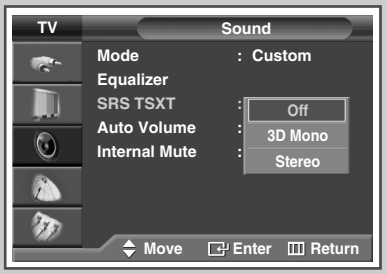
5 Select the required option by pressing the ▲ or ▼ button.

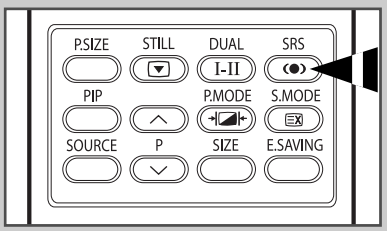
Result: The following options are available.

Off - 3D Mono - Stereo

6 Press the **ENTER** (↵) button.





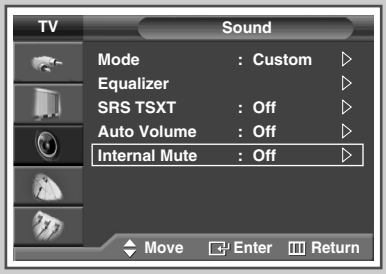


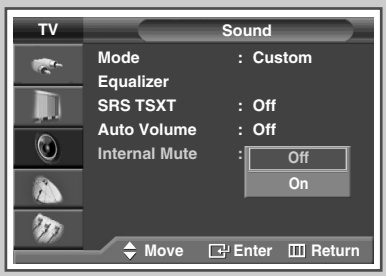
➢ You can select these options simply by pressing the **SRS** (●) button on the remote control.

➢ TruSurround XT, SRS and (●) Symbol are trademarks of SRS Labs, Inc. TruSurround XT technology is incorporated under license from SRS Labs, Inc.

SRS(●) TruSurround XT

Selecting the Internal Mute





If you want to hear the sound through separate speakers, cancel the internal amplifier.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Sound**.

Result: The **Sound** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Internal Mute**.
Press the **ENTER** (↵) button.

5 Select **Off** or **On** by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

Setting the Melody Sound

You can hear melody sound when the television is powered on or off.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Setup**.

Result: The **Setup** menu is displayed.

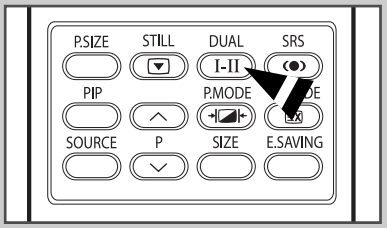
3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Melody**.
Press the **ENTER** (↵) button.

5 Select **Off** or **On** by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

Selecting the Sound Mode (depending on the model)

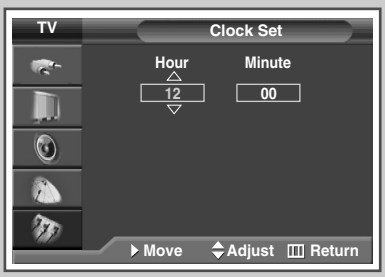
The "DUAL I-II" button displays/controls the processing and output of the audio signal. When power is switched on, the mode is automatically preset to either "DUAL-I " or "Stereo", depending on the current transmission.

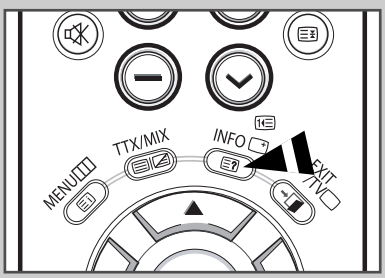


	Type of broadcast	On-screen indication
NICAM Stereo	Regular broadcast (Standard audio)	**Mono** (Normal use)
	Regular + NICAM Mono	**NICAM Mono ↔ Mono**
	NICAM stereo	**NICAM stereo ↔ Mono** (Forced mono)
	NICAM DUAL-I/II	**NICAM DUAL-I → NICAM DUAL-II → Mono**
A2 Stereo	Regular broadcast (Standard audio)	**Mono**
	Bilingual or DUAL-I/II	**DUAL-I ↔ DUAL-II**
	Stereo	**Stereo ↔ Mono** (Forced mono)

➢
- If the receiving conditions deteriorate, listening will be easier if the mode is set to **Mono**.
- If the stereo signal is weak and automatic switching occurs, switch to **Mono**.
- When receiving mono sound in AV mode, connect to the "AUDIO-L" input connector on the panel (front or side, depending on the model). If mono sound only comes out of the left speaker, press the **DUAL I-II** button.

Setting and Displaying the Current Time





You can set the television's clock so that the current time is displayed by pressing the "INFO ( )" button. You must also set the time if you wish to use the automatic on or off timers.

➢ When pressing the power button (On/Off) on the panel of the television, the clock setting will be reset.

1 Press the **MENU** ( ) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Setup**.

Result: The **Setup** menu is displayed.

3 Press the **ENTER** ( ) button.

4 Press the ▲ or ▼ button to select **Time**.
Press the **ENTER** ( ) button.

Result: The **Clock Set** is selected.

5 Press the **ENTER** ( ) button again.

6 Press the ◄ or ► button to select **Hour** or **Minute**.
Set these by pressing the ▲ or ▼ button.

➢ You can also set these by pressing the numeric buttons directly.

7 Press the **ENTER** ( ) button.

➢ In the event of a power interuption or the set being turned off at the supply, the settings for the Clock will be lost.

Setting the Sleep Timer

You can select a time period of between 30 and 180 minutes after which the television automatically switches to Standby mode.

1 Press the **MENU** (☐☐☐) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Setup**.

Result: The **Setup** menu is displayed.

3 Press the **ENTER** (↵) button.

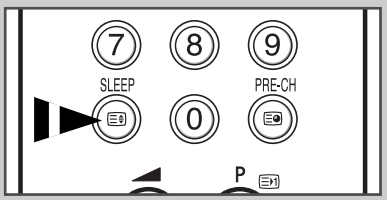
4 Press the ▲ or ▼ button to select **Time**.
Press the **ENTER** (↵) button.

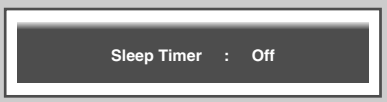
Result: The **Time** menu is displayed.

5 Press the ▲ or ▼ button to select **Sleep Timer**.
Press the **ENTER** (↵) button.

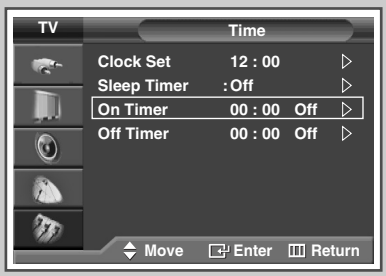
6 Select the preset time interval (**Off**, **30**, **60**, **90**, **120**, **150**, or **180**) for staying on by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

➢
- You can select these options simply by pressing the **SLEEP** button on the remote control.
- If the sleep timer is not yet set, **Off** is displayed.
  If the sleep timer is already set, the remaining time before which the television switches to standby mode is displayed.





Switching the Television On and Off Automatically



You can set the on or off timers so that the television will:

- ***Switch on automatically and tune to the channel of your choice at the time you select.***
- ***Switch off automatically at the time you select.***

➢ The first step is to set the television's clock (refer to "Setting and Displaying the Current Time" on page 48).

1 Press the **MENU** (☐☐) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Setup**.

Result: The **Setup** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **Time**.
Press the **ENTER** (↵) button.

Result: The **Time** menu is displayed.

5 Press the ▲ or ▼ button to select **On Timer**.
Press the **ENTER** (↵) button.

Result: The **On Timer** menu is displayed.

6 Select **Hour**, **Minute**, **Programme**, or **Volume** by pressing the ◀ or ▶ button.
Set these by pressing the ▲ or ▼ button.

➢ You can also set these by pressing the numeric buttons directly.

7 Press the ◀ or ▶ button to select **Activation**.

8 To activate **On Timer** with the setting entered, select **Yes** by pressing the ▲ or ▼ button.

9 Press the **ENTER** (↵) button.

Result: The **Time** menu is displayed again.

10 Press the ▲ or ▼ button to select **Off Timer**.
Press the **ENTER** (↵) button.

Result: The **Off Timer** menu is displayed.

11 Select **Hour** or **Minute** by pressing the ◄ or ► button.
Set these by pressing the ▲ or ▼ button.

➢ You can also set these by pressing the numeric buttons directly.

12 Press the ◄ or ► button to select **Activation**.

13 To activate **Off Timer** with the setting entered, select **Yes** by pressing the ▲ or ▼ button.

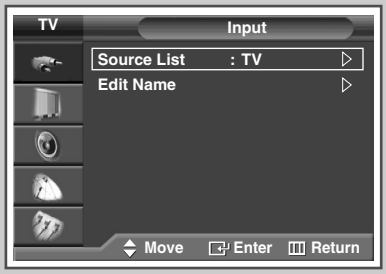
14 Press the **ENTER** (↵) button.

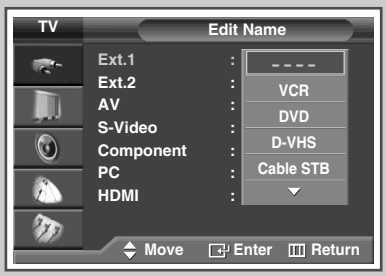
➢ **Auto Power Off**

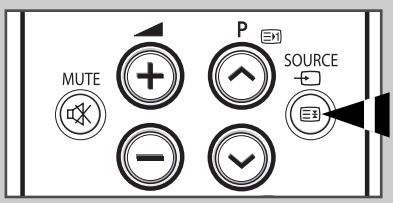
When you set the timer "On", the television will eventually turn off, if no controls are operated for 3 hours after the TV was turned on by timer. This function is only available in timer "On" mode and prevents overheating or leakages, which may occur if a TV is on for too long (when you are on vacation, for example).

➢ If no signal is received for 15 minutes, the TV will be automatically turned off.

Viewing an External Signal Source







Use the remote control to switch between viewing signal from connected equipment, such as VCR, DVD, Set-Top box, and the TV source (broadcast or cable).

1 Press the **MENU** (☐☐☐) button.

Result: The main menu is displayed.

2 Press the **ENTER** (↵) button to select **Input**.

Result: The **Input** menu is displayed.

3 Press the **ENTER** (↵) button.

Result: The **Source List** is selected.

4 Press the **ENTER** (↵) button agian.

5 Press the ▲ or ▼ button to select the signal source, press the **ENTER** (↵) button.

Result: The available signal sources are listed.

➢ ◆ **TV**, **Ext.1**, **Ext.2**, **AV**, **S-Video**, **Component**, **PC**, or **HDMI** : on the TV's rear panel.
◆ You can also set these options simply by pressing the **SOURCE** (⇥) button on the remote control.

6 Press the **MENU** (☐☐☐) button.

Result: The main menu is displayed.

7 Press the **ENTER** (↵) button to select **Input**.

Result: The **Input** menu is displayed agian.

8 Press the ▲ or ▼ button to select **Edit Name**.
Press the **ENTER** (↵) button.

9 Press the ▲ or ▼ button to select external source to be edited.
Press the **ENTER** (↵) button.

Result: The available device names are listed.

VCR, **DVD**, **D-VHS**, **Cable STB**, **HD STB**, **Satellite STB**, **AV Receiver**, **DVD Receiver**, **Game**, **Camcorder**, **DVD Combo**, **DHR (DVD HDD Recorder)**, or **PC**

10 Select the required device by pressing the ▲ or ▼ button.
Press the **ENTER** (↵) button.

➢ If you change the external source while viewing, pictures might take a short period of time to switch.

Redirecting an Input to the External Output

Your television enables you to choose which audio/video signals are output to the external connector.

1 Press the **MENU** (▥) button.

Result: The main menu is displayed.

2 Press the ▲ or ▼ button to select **Setup**.

Result: The **Setup** menu is displayed.

3 Press the **ENTER** (↵) button.

4 Press the ▲ or ▼ button to select **AV Setup**.
Press the **ENTER** (↵) button.

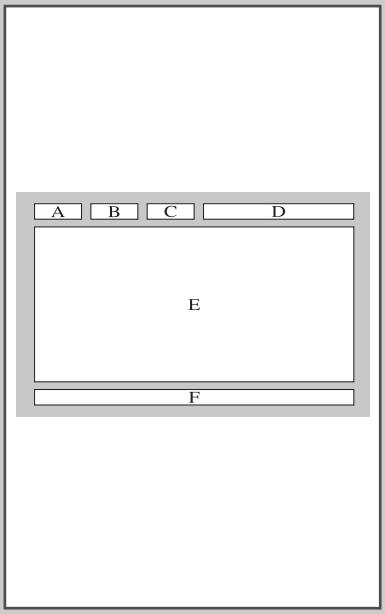
Result: The **AV Setup** menu is displayed.

5 Press the ▲ or ▼ button to select required input (**Ext.2**). Press the **ENTER** (↵) button. Select the source to be directed to the output by pressing the ▲ or ▼ button.

➢
- **Ext.1** : Default (**TV**)
- **Ext.2** : Variable (**TV**, **Ext.1**, **Ext.2**, **AV**, **S-Video**, or **Monitor Out**)

6 Press the **ENTER** (↵) button.

Teletext Feature



Most television channels provide written information services via teletext. Information provided includes:

- ***Television programme times***
- ***News bulletins and weather forecasts***
- ***Sports results***
- ***Travel information***

The teletext pages are organized according to six categories:

Part	Contents
A	Selected page number.
B	Broadcasting channel identity.
C	Current page number or search indications.
D	Date and time.
E	Text.
F	Status information.
	FASTEXT information.

➢ Teletext information is often divided between several pages displayed in sequence, which can be accessed by:

- Entering the page number
- Selecting a title in a list
- Selecting a coloured heading (FASTEXT system)

Displaying the Teletext Information

You can display Teletext information at any time on your television.

☛ For Teletext information to be displayed correctly, channel reception must be stable; otherwise:

- Information may be missing
- Some pages may not be displayed

1 Select the channel providing the Teletext service by pressing the **P** ⌃ or ⌄ button.

2 Press the **TTX/MIX** (▤|◪) button to activate the teletext mode.

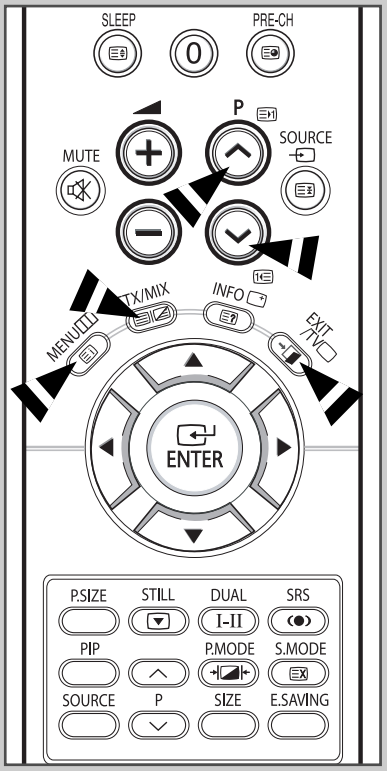
Result: The contents page is displayed. It can be redisplayed at any time by pressing the ⓘ (index) button.

3 Press the **TTX/MIX** (▤|◪) button again.

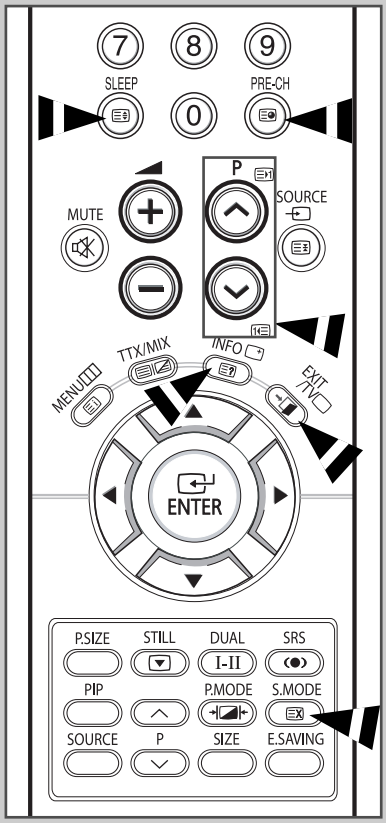
Result: The screen will be split into two. This Double Teletext feature lets you view the actual broadcast and teletext information separately on the screen.

4 If you wish to display the actual broadcast and teletext information on a single screen, press the **TTX/MIX** (▤|◪) button again.

5 Press the **EXIT/TV** button to exit from the teletext display.



Selecting Display Options



When you have displayed a Teletext page, you can select various options to suit your requirements.

To display...	Press the...
◆ Hidden text (answers to quiz games, for example)	(reveal)
◆ The normal screen	(reveal) again
◆ A secondary page	(sub-page)
◆ The broadcast when searching for a page	(cancel)
◆ The next page	(page up)
◆ The previous page	(page down)
◆ Double-size letters in the: • Upper half of the screen • Lower half of the screen	(size) • Once • Twice
◆ Normal screen	• Three times

➢ To return to the normal display after using the reveal or size feature, press the **EXIT/TV** button.

Selecting a Teletext Page

You can enter the page number directly by pressing the numeric buttons on the remote control.

1 Enter the three-digit page number given in the content by pressing the corresponding numeric buttons.

Result: The current page counter is incremented and the page is then displayed. If the selected page is linked with several secondary pages, the secondary pages are displayed in sequence. To freeze the display on a given page, press the (hold). Press it again to resume.

2 If the FASTEXT system is used by a broadcasting company, the different topics covered on a Teletext page are colour-coded and can be selected by pressing the coloured buttons on the remote control.
Press the coloured button corresponding to the topic that you wish to select; the available topics are given in the status line.

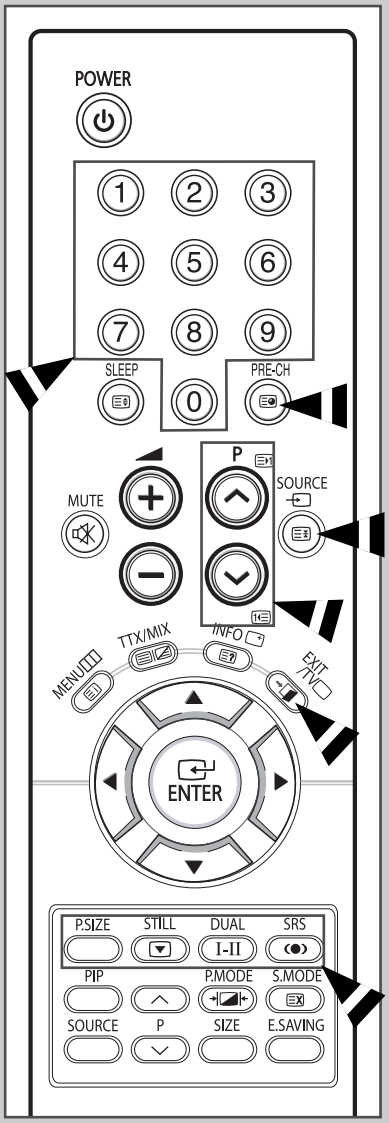
Result: The page is displayed with other coloured information that can be selected in the same way.

3 To display the previous or next page, press the corresponding coloured button.

4 To display the sub-page, see the following steps.

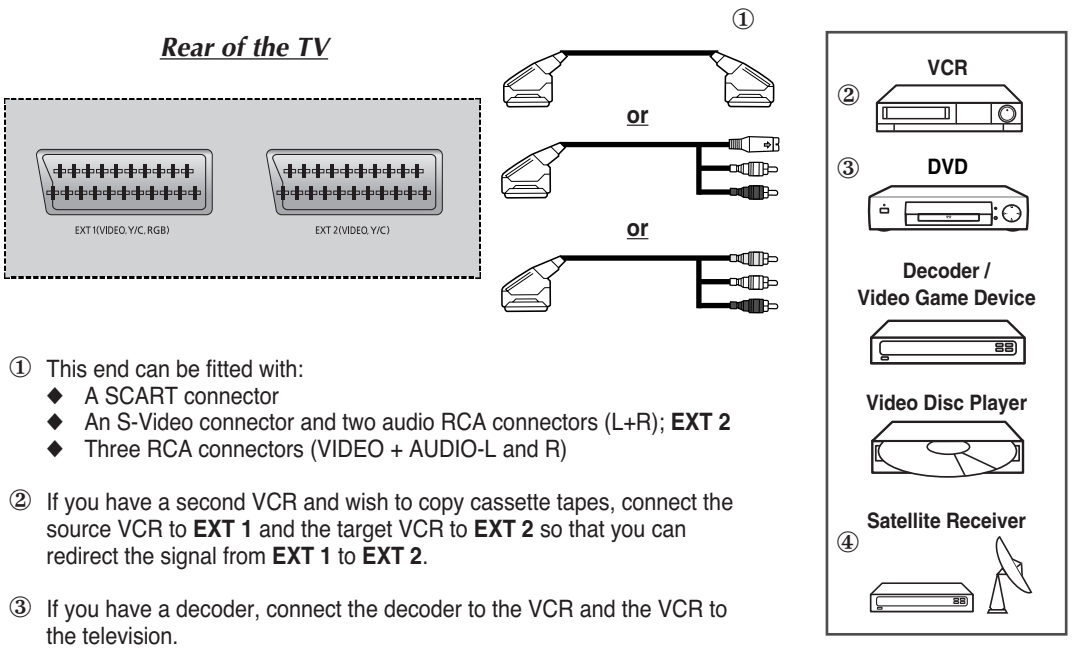
- Press the (sub-page) button.
  Result: The available sub-pages appear.
- Select the required sub-page. Sub-pages can be scrolled by pressing the or button.

5 When you have finished, press the **EXIT/TV** button to return to your normal broadcast.



Connecting to External Input/Output

"**EXT 1**" is used for the equipment with an RGB output, such as video game devices or video disc players.



① This end can be fitted with:
- A SCART connector
- An S-Video connector and two audio RCA connectors (L+R); **EXT 2**
- Three RCA connectors (VIDEO + AUDIO-L and R)

② If you have a second VCR and wish to copy cassette tapes, connect the source VCR to **EXT 1** and the target VCR to **EXT 2** so that you can redirect the signal from **EXT 1** to **EXT 2**.

③ If you have a decoder, connect the decoder to the VCR and the VCR to the television.

④ When you wish to record a programme, connect the receiver to **EXT 1** and the VCR to **EXT 2** so that you can redirect the signal from **EXT 1** to **EXT 2**.

➢ Please be sure to match the colour coded input terminals and cable jacks.

Input/Output Specification

Connector	Input				Output
	Video	Audio (L/R)	S-Video	RGB	Video + Audio (L/R)
EXT 1	✔	✔	✔	✔	Only TV output is available.
EXT 2	✔	✔	✔		Output you can choose.

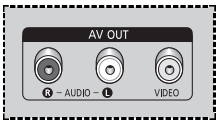
☛ Whenever you connect an audio or video system to your television, ensure that all elements are switched off.

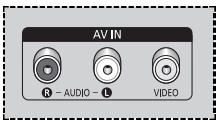
Refer to the documentation supplied with your equipment for detailed connection instructions and associated safety precautions.

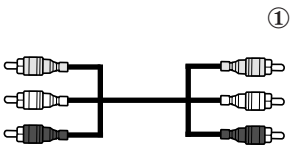
Connecting to the AV Output

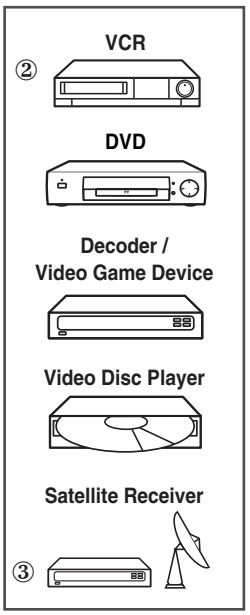
"**AV OUT**" are used for the equipment with an RGB output, such as video game devices or video disc players.

Rear of the TV









① This end can be fitted with:
- Three RCA connectors (VIDEO + AUDIO L/R)

② If you have a second VCR and wish to copy cassette tapes, connect the source VCR to **"AV IN"** and the target VCR to "**AV OUT**" so that you can redirect the signal from **"AV IN"** to "**AV OUT**".

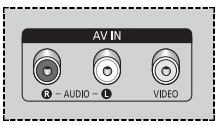
③ When you wish to record a programme, connect the receiver to **"AV IN"** and the VCR to "**AV OUT**" so that you can redirect the signal from **"AV IN"** to "**AV OUT**".

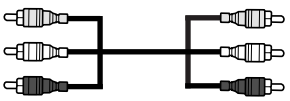
➢ Please be sure to match the colour coded input terminals and cable jacks.

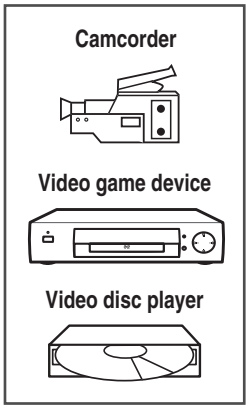
Connecting to the RCA Input

➢ The RCA (**VIDEO** + **AUDIO L /R**) connectors are used for equipment, such as camcorders, video disc players, and some video game devices.

Rear of the TV





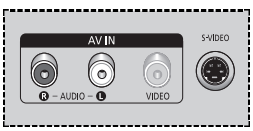


➢ Please be sure to match the colour coded input terminals and cable jacks.

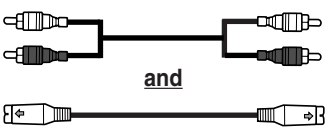
Connecting to the S-Video Input

➢ The **S-VIDEO** and **AUDIO L /R** connectors are used for equipment with an S-Video output, such as a camcorder or VCR.

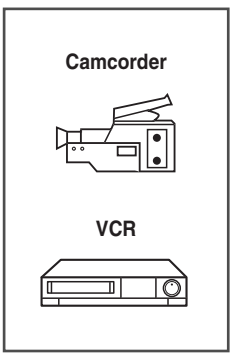
Rear of the TV



①



and



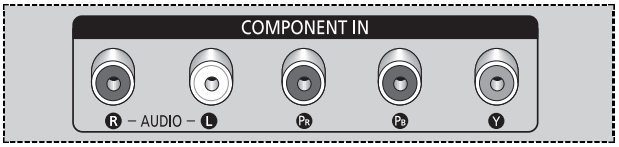
① To play pictures and sound, both the **S-VIDEO** and **AUDIO L /R** connectors must be used.

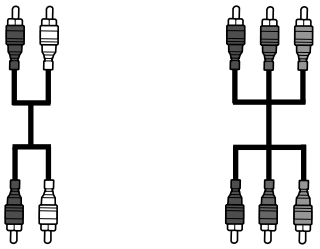
➢ Please be sure to match the colour coded input terminals and cable jacks.

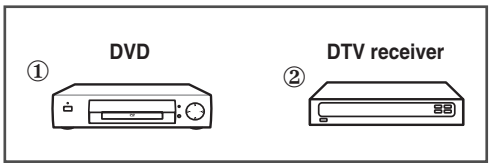
☛ Whenever you connect an audio or video system to your television, ensure that all elements are switched off. Refer to the documentation supplied with your equipment for detailed connection instructions and associated safety precautions.

Connecting to the Component Input

Rear of the TV







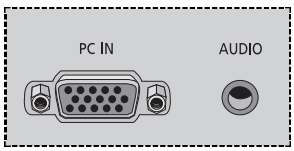
The **COMPONENT IN** connectors are used for equipment with a DVD or DTV receiver output.
(480i/480p/576i/576p/1080i)

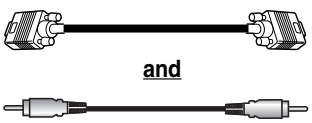
➢ Please be sure to match the colour coded input terminals and cable jacks.

Connecting to the PC Input

➢ The "**PC IN**" (video) and "**AUDIO**" connectors are used for interfacing with your PC.

Rear of the TV





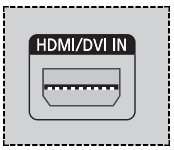
and

Personal Computer

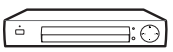
Connecting to the HDMI Input

➢ The "**HDMI/DVI IN**" connector is used for equipment with an HDMI out.

Rear of the TV



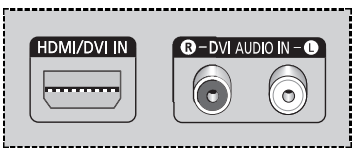
DTV Set-Top Box

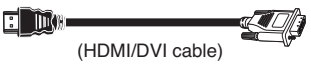


Connecting to the HDMI/DVI Compatible

➢ The "**HDMI/DVI IN**" connector is used for equipment with a DVI out.

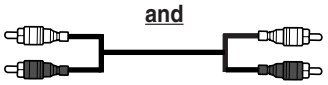
Rear of the TV



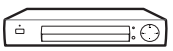


(HDMI/DVI cable)

and



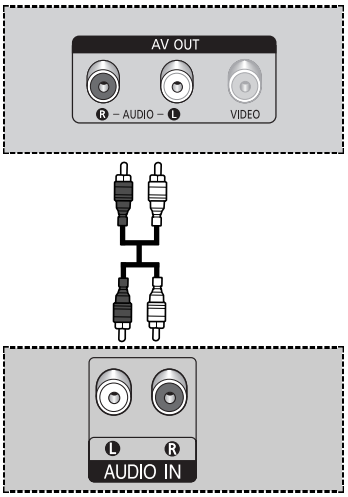
DTV Set-Top Box

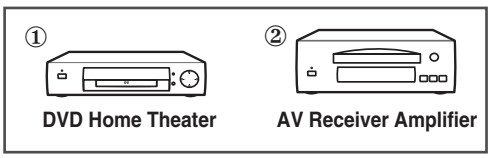


Connecting Home Theater System

Use the "**AV OUT**" ports of the PDP for Home Theater System Connections.

Rear of the TV





Connecting the Home Theater System

① Connect the monitoring audio out L and R jacks of the **AV OUT** on the rear-side connection panel of the PDP TV to the AUDIO IN jacks of the DVD Home Theater System (or AV Receiver) using the audio cable.

② Press the **SOURCE** (⏎) button to select the desired external device connected to the PDP TV.

③ If you want to hear the sound through separate speakers, cancel the internal amplifier.

➢ Please be sure to match the colour coded input terminals and cable jacks.

☛
- ◆ Refer to corresponding user's manual from the manufacturer for wiring the speakers to the DVD Home Theater System (or AV Receiver).
- ◆ Disable the PDP TV internal speaker to enjoy the rich sound through the speakers of your Home Theater System.

To Display the DVD Home Theater

① Turn the PDP on and press the **SOURCE** (⏎) button to select the **Ext.1, Ext.2,** or **Component**.

② Be sure to connect the video cable properly if desired external input (**Ext.1, Ext.2,** or **Component**) cannot be selected.

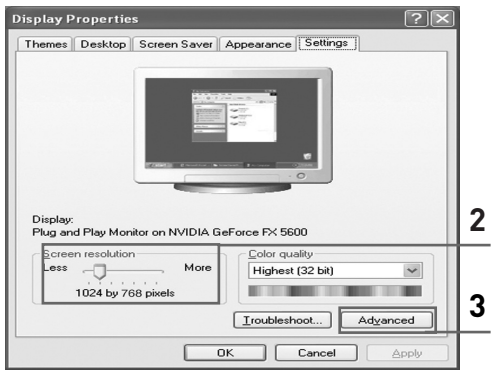
③ Play the DVD after activating the DVD Home Theater System.

④ Use the volume control of the Home Theater System while watching the PDP using the DVD Home Theater, where the PDP TV does not produce the audio.

Setting up Your PC Software (Windows only)

The Windows display-settings for a typical computer are shown below. But the actual screens on your PC will probably be different, depending upon your particular version of Windows and your particular video card. But even if your actual screens look different, the same, basic set-up information will apply in almost all cases. (If not, contact your computer manufacturer or Samsung Dealer.)

1 Right click the mouse on the Windows Desktop, then click on **Properties**.
The **Display Properties** will be displayed.



2 Click on **Settings tab**, then set the Display Mode with reference to the Display Modes Table.
You do not need to change the Colours settings.

3 Click on **Advanced**. A new settings dialog box will be displayed.

4 Click on the **Monitor** tab, then set the **Screen refresh rate** with reference to the Display Modes Table. Set the Vertical Frequency and Horizontal Frequency individually if you can do so instead of setting the **Screen refresh rate**.

5 Click on **OK** to close the window, then Click on **OK** button to the **Display Properties** window. Automatic re-booting may commence at this moment.

6 Shutdown the PC, and connect it to your TV. (“Connecting to the PC Input” on page 61)

➢
- The actual screens on your PC may look different, depending on your particular version of Windows and the type of your PC.
- When you use your TV as a PC monitor, it supports Colours up to 32 bits.
- In this case, the display on the TV may look different depending on your particular version of Windows or the PC manufacturer.
- When connecting a PC you must set it to the display settings that are supported by the TV. Otherwise, the message **`Out of input range`** will be displayed.

Input Mode (PC)

Both screen position and size will vary depending on the type of PC monitor and its resolution. The table below shows all of the display modes that are supported:

Video Signal	Resolution (Dot X Line)	Vertical frequency (Hz)	Horizontal frequency (kHz)	Vertical polarity	Horizontal polarity
IBM PC / AT Compatible	640 x 350	70.086	31.469	P	N
	720 x 400	70.087	31.469	N	P
	640 x 480	59.940	31.469	N	N
		70.000	35.000	N/P	N/P
		72.809	37.861	N	N
		75.000	37.500	N	N
	800 x 600	56.250	35.156	N/P	N/P
		60.317	37.879	P	P
		70.000	43.750	N/P	N/P
		72.188	48.077	P	P
		75.000	46.875	P	P
	848 x 480	60.000	31.020	P	P
		74.769	37.684	P	N
	1024 x 768	60.004	48.363	N	N
		70.069	56.476	N	N
		72.000	57.672	N/P	N/P
		75.029	60.023	P	P

(N: Negative / P: Positive)

- The interlace mode is not supported.
- The television might operate abnormally if a non-standard video format is selected.
- 480i/p, 576i/p, 720p, or 1080i is not available in PC mode.

Notes

- The PC text quality is optimum in **WVGA** mode (848 x 480@60Hz).
- When this television is used as a PC display, 32-bit colour is supported.
- Your PC display screen might appear different depending on the manufacturer (and your particular version of Windows). Check your PC instruction book for information about connecting your PC to a television.
- If a vertical and horizontal frequency-select mode exists, select 60Hz (vertical) and 31.5kHz (horizontal). In some cases, abnormal signals (such as stripes) might appear on the screen when the PC power is turned off (or if the PC is disconnected). If so, press the **SOURCE** (⏎) button to enter the Video mode. Also, make sure that the PC is connected.
- When connecting a notebook PC to the television, make sure that the PC screen is displayed through only the television (Otherwise, random signals might appear).
- When horizontal synchronous signals seem irregular in PC mode, check PC power saving mode or cable connections.
- The Display Settings Table above complies to the IBM/VESA standards, and based on the analog input.
- The best timing for the vertical frequency to each mode is 60Hz.

Troubleshooting: Before Contacting Service Personnel

Before contacting Samsung after-sales service, perform the following simple checks.

If you cannot solve the problem using the instructions below, note the model and serial number of the television and contact your local dealer.

No sound or picture	◆ Check that the mains lead has been connected to a wall socket. ◆ Check that you have pressed the power button (On/Off) and the **POWER** (⏻) button. ◆ Check the picture contrast and brightness settings. ◆ Check the volume.
Normal picture but no sound	◆ Check the volume. ◆ Check whether the volume **MUTE** (🔇) button on the remote control has been pressed.
No picture or black and white picture	◆ Adjust the colour settings. ◆ Check that the broadcast system selected is correct.
Sound and picture interference	◆ Try to identify the electrical appliance that is affecting the television, then move it further away. ◆ Plug your television into a different mains socket.
Blurred or snowy picture, distorted sound	◆ Check the direction, location and connections of your aerial. This interference often occurs due to the use of an indoor aerial.
Remote control malfunctions	◆ Replace the remote control batteries. ◆ Clean the upper edge of the remote control (transmission window). ◆ Check the battery terminals.
Screen is black and power indicator light blinks steadily	◆ On your computer check; Power, Signal Cable. ◆ The TV is using its power management system. ◆ Move the computer's mouse or press any key on the keyboard. ◆ On your equipment check (STB, DVD, etc) ; Power, Signal Cable. ◆ The TV is using its power management system. ◆ Press the Source button on the panel or remote control. ◆ Turn the TV off and on.

Memo

– AFTER SALES SERVICE

– Do not hesitate to contact your retailer or service agent if a change in the performance of your product indicates that a faulty condition may be present.

SAMSUNG ELECTRONICS

Correct Disposal of This Product
(Waste Electrical & Electronic Equipment)
(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.
Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.
Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

BN68-00867K-01